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Southern Medical Record

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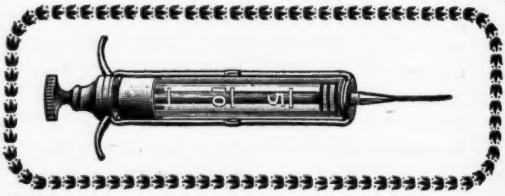

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A MONTHLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XXVIII. ATLANTA, GA., OCTOBER, 1898. NO. 10.

Original Articles.

THE DIAGNOSIS AND TREATMENT OF DIETETIC ALBUMINURIA.

By J. HOWE ADAMS, M. D., Overbrook, Pa.

Considerable confusion exists in many quarters as to the meaning and limitation of the term "dietetic albuminuria," its symptoms, its pathology and its treatment. True dietetic albuminuria is that form in which the albumin is found in the urine only after certain kinds of food have been ingested, being taken as a rule in immoderate amounts, such as eggs, cheese or pastry. Consequently this condition is not constantly present but occurs at special periods, such as after breakfast or a noonday meal. It can only follow the taking of food, and as a rule, it follows this action very promptly; it is unattended by any other sign of disease, tube casts being totally absent.

It is a very important factor in the diagnosis to remember that albumin is never found in the urine before breakfast, and there is lacking all signs of disorder of the nervous system as is found commonly in other forms of kidney trouble. The urine shows a high specific gravity; in fact, many observers lay great stress on this point, claiming that this condition is invariable in these cases. This point of high specific gravity is one of great importance in kidney trouble; except in very acute cases of Bright's disease or in those advanced cases where there is a diminution of the solid matter in the urine which is counterbalanced by the decrease in the water excreted, thus raising the specific gravity, the presence of high specific gravity in any urine is fair presumptive evidence that the urine

is not from a case of Bright's disease. It is well to remember that high specific gravity in the urine is often associated with what might be called "harmless albuminuria."

The absence of albumin in the early morning urine in dietetic albuminuria becomes a matter of great importance in many instances, even outside strictly medical matters; for example, Dr. Pavy of London relates a case occurring in his practice in which a young lad seeking a position in the English civil service was rejected on the ground of the presence of albumin in his urine; his medical adviser thought of the possibility of its being this form of albuminuria and found that his urine passed on rising was perfectly normal in its constituents. This statement applies in this country with great force to candidates for life insurance.

As the symptoms of dietetic albuminuria are characteristic, it would seem easy to distinguish it from other expressions of disease, but such is not always the case. The albuminuria following severe exercise is occasionally mistaken for this form; its diagnostic point is the fact that it occurs only after strenuous exertion, while there is an absence of all other symptoms both as regards the nervous system and the digestive state. The severe exertion does not produce albumin in a distinctive or striking manner, and as soon as the strain is over the abnormal ingredient at once disappears. It is much more difficult to distinguish between true dietetic albuminuria and that due to mal-assimilation; in fact, these forms are generally confused. Possibly the difference is only one of degree, but in that form due to excessive uric acid formation, the symptoms are much more marked than in the pure dietetic form. In the uric acid variety the patient suffers from indigestion, flatulence and constipation; he is very nervous; mentally he is greatly depressed about himself and he is frequently annoyed by an irritable bladder. Albumin is found in the urine, frequently being most marked in the afternoon evacuations. Occasionally a few epithelial casts may be found; the urine is strongly acid with a specific gravity rarely below 1022 and with deposits of quantities of "brick-dust." This uric acid mal-assimilation may become so marked that it will be confused with the ordinary form of Bright's disease, especially when the patient exhibits some body waste, indisposition to either mental or physical exertion, and is easily fatigued with the production of frequent headaches and vertigo. But to distinguish this mal-assimilative condition from true Bright we soon see that the hypertrophies and other cardiac lesions of Bright's disease are wanting; there is no dropsy or eye lesions and the actual character of the urine is most significant. It is in the urine that the diagnosis between uric acid trouble and the other varieties must be made, after all; first of all there is the high specific in uric acid conditions in a urine that is about

normal in amount or a little scantier than normal. The specific gravity generally ranges high, from 1022 to even as high as 1036. The urine on standing deposits urates, even uric acid and frequently mucus; or in the deposits in the place of the urates, are often found crystals of the oxalate of calcium, for the uric acid condition does not necessarily show itself in the presence of urates in the urine. The solid matters are increased but the salts vary but little, although the chlorides are increased and not diminished, as they are in contracting kidney.

When it comes to the differential diagnosis between true dietetic albuminuria and that due to uric excess, we find that in the latter condition the amount of albumin is more regularly present in the urine although it varies with the time of day, being more pronounced after breakfast while it is frequently absent after the evening meal. But here, as in other cases of so-called intermittent albuminuria, there is this fallacy to be remembered—the albumin is not really absent, but is only greatly diminished. A fine test, such as the use of acetic acid to acidulate the urine, and then the use of Tanret's test may bring it out. Casts are scanty or absent in uric acid conditions as well as in the true dietetic form; when present they are hyaline or epithelial in character, rarely granular, never fatty.

The pathological condition which gives rise to the album of uric acid is essentially a congestion of the kidney with slight local inflammation in the vascular cortex from the irritating effects of secreting increased amounts of ill-formed or broken-down tissue in the form of urates urea or those imperfectly oxidized as oxalates. In other words, the kidneys are not the primary cause of trouble, but simply the kidneys suffer because they are compelled to throw off irritating waste-products. Anything that lowers vitality and disturbs the nervous system may increase the faulty assimilation and, with it, the irritation and congestion which produce the albuminuria. All these symptoms are more marked than those occurring in the true dietetic form, so that a careful examination should show a distinction.

When it comes to the important question of treatment of these forms of albuminuria, we must bear in mind that we are dealing with special diseases in which mal-assimulation is the main element and the kidney affection only a conspicuous expression. The treatment must not be therefore purely that of Bright's disease, as we meet it commonly, but largely that of the underlying condition, a state that borders on lithæmia. The lines of treatment in these cases are therefore parallel. It is essential to lessen the work on the kidneys as in ordinary forms of Bright's disease by calling into play the various emunctories. It is quite as essential to lessen the load on

the kidneys, for it is possible for this condition to pass into true organic affection of the kidneys, although considering the force of the irritating agent, this occurs far less frequently than would be supposed at first thought. When it does happen, it is brought about by the constant irritation, leading to slow fibroid changes and gradually developing interstitial nephritis. In the first place, to keep the kidneys flushed, the free use of pure water should be urged, plain or aerated; and the mild diuretic waters, such as Poland, Saratoga Vichy or Vichy, are always of service. Drinking hot water at bed-time often has a most happy diuretic effect which makes it doubly serviceable, for these products are largely excreted in the morning hours. Alcoholic drinks should be avoided, or, if used, restricted to light non-acid wines; no beer should be permitted.

To further our purposes still more, it is well to advocate the use of baths, not too cold, followed by systematic skin friction; while the value of open-air exercise is frequently most marked. Cold douches to the spine are recommended by some authorities, especially in the true dietetic form of albuminuria. Among laxatives, Rochelle salt, cream of tartar and phosphate of soda are the most valued. Mercury before the saline is often of excellent effect; also is iron, especially in the form of the tartrate of iron and potassium. Nitro-muriatic acid is a stand-by in many of these cases. The heart must not be forgotten in these cases, for the poorly oxidized elements circulating in the blood and the general mal-nutrition and the lowered nerve-force disturb its tone; hence any lack of steadiness it exhibits should be met by digitalis or strychnine. The inhalation of oxygen has been suggested, but its therapeutic value has not been settled.

But the most important indication in these cases is in the matter of diet; by paying close attention to the food ingested, the labor of the kidneys can be much lessened while the character of the blood can be greatly improved. Vegetables, especially the green vegetables and fruits, are freely allowed; tea, coffee and cocoa are sanctioned, if sweetened but slightly, as are small quantities of oatmeal, buckwheat, corn cakes, rice, bread and butter, also oysters and fish. The white meat of poultry and game can be eaten in moderation, but the meats containing much nitrogen, such as mutton and beef, should be tabooed. In my experience, however, when the patient indulges in considerable exercise, especially in young men, meats may be eaten in careful amounts without damage. Milk does not seem to be of especial value in these cases; in fact, there are a number of cases on record where a strictly vegetable diet effected permanent cures after exclusive milk diet had left the urine still albuminous. Eggs need not be forbidden, but should be eaten in moderation and the yellow portion alone selected

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for that purpose. It is well to be strict as to sugars, for most commonly they aggravate the symptoms; hence beets and rhubarb should also be forbidden. Salt, on the other hand, should be freely given.

As to the prognosis, it is favorable when we can make the treatment effective. Thus we have a form of albuminuria which has been rescued from the list of Bright's disease; its clinical history impresses on us that in the examination of the urine it is not sufficient to make the ordinary tests for albumin, but the investigation must be pushed further. If the urine is examined in a routine way without regard to these points, the patient will be often condemned when his condition does not justify it at all.

Ocular Affections in the Early Stages of Syphilis.—Wilbrand and Staelin examined the eyes of 200 patients in the early period of syphilis. They found disease of the eyelids in 20 per cent. of the cases, viz.: Hyperemia ciliorum, edema and redness of lids, blepharitis ciliaris, slight ptosis, and the like.

The conjunctiva was hyperemic in 17 per cent., abnormally pale in 5 per cent. In 10 per cent. there were papules on the mucosa.

The cornea showed unilateral parenchymatous inflammation in one case; the sclera in one case showed bilateral episcieritis.

There was iritis in 5 per cent. complicated with choroiditis in 2 per cent.

The optic nerve was affected in 14 per cent. of cases, the affections comprising hyperemia, neuritis, retrobulbar neuritis, and neuro-retinitis.

There was moderate contraction of the visual field in 36 per cent., due mostly to the disturbance of the general condition.

The Mauser Bullet.—In a paper read before the N. Y. Academy of Medicine, Dr. Wm. D. Bell (*Medical Record*) stated that at a greater range than 200 yards the Mauser bullet gave a small wound of entrance and only a slightly larger wound of exit. If the bone was shot through at shorter range there was always some comminution. In several instances the Mauser bullet passed through the skull and out again without producing any apparent injury to the brain, and the men returned to duty in two or three days.

SOME OBSERVATIONS ON BRAIN ANATOMY AND BRAIN TUMORS.

ABSTRACT.

Dr. William C. Krauss, of Buffalo, read a paper at the ninety-second annual meeting of the Medical Society of the State of New York, Albany, Jan. 25, 1898, with the above title.

He called attention (1) to the difficulty in remembering the gross anatomy of the brain, and (2) to the almost universal presence of optic neuritis in cases of brain tumor.

He attempted to overcome the difficulty in regard to the anatomy of the brain by formulating the following rules, which are somewhat unique and original, and at the same time easily remembered.

RULE OF TWO. 1. The nerve centers are divided into two great divisions, (1) encephalon, (2) myelon. 2. The encephalon is divided into two subdivisions, (1) cerebrum, (2) cerebellum. 3. The cerebrum, cerebellum and myelon are divided into two hemispheres each, (1) right, (2) left. 4. The encephalon is indented by two great fissures, (1) longitudinal, (2) transverse. 5. Into these two great fissures there dip two folds of the dura, (1) falx cerebri, (2) tentorium cerebelli. 6. There are two varieties of brain matter, (1) white, (2) gray.

RULE OF THREE. 1. There are three layers of membranes surrounding the brain, (1) dura, (2) arachnoid, (3) pia. 2. Each hemisphere is indented by three major fissures, (1) sylvian, (2) rolandic or central, (3) parieto-occipital. 3. Three lobes, frontal, temporal and occipital, on their convex surface are divided into three convolutions each, superior, middle and inferior, or first, second, and third. 4. There are three pairs of basal ganglia, (1) striata, (2) thalami, (3) quadrigemina. 5. The hemispheres of the brain are connected by three commissures, (1) anterior, (2) medi, (3) post-commissure. 6. The cerebellum consists of three portions, (1) right, (2) left hemisphere, (3) vermes. 7. There are three pairs of cerebellar peduncles, (1) superior, (2) middle, (3) inferior. 8. The number of pairs of cranial nerves, in the classifications of Willis and Sommering, can be determined by adding 3 to the number of letters in each name, that of Willis making 9, and that of Sommering making 12 (or the name containing the more letters has the larger number of pairs of nerves, and vice versa). 9. The cortex of the cerebellum is divided into three layers of cells, (1) granular, (2) Purkinje's cells, (3) a molecular layer.

RULE OF FIVE. 1. Each hemisphere is divided externally into five lobes, of which four are visible, (1) frontal, (2) parietal, (3) temporal, (4) occipital; and one invisible, (5) insula (Isle of Reil). Roughly speaking, the visible lobes correspond to the bones of the cranium; that is, the frontal lobe is under-

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neath the frontal bone, the parietal lobe beneath the parietal bone, etc. 2. The brain contains five ventricles, of which four are visible, the right and left, or first and second, the third and the fouth; and one invisible, the fifth, or pseudo-ventricle. 3. The cortex of the brain contains five distinct layers of ganglion cells.

Studying carefully a hundred casesof brain tumor in which an ophthalmoscopic examination had been made for the presence or absence of choked disc (optic neuritis), Dr. Krauss announced the following conclusions:

1. Optic neuritis is present in about 90 per cent of all cases of brain tumor.

2. It is more often present in cerebral than in cerebellar cases.

3. The location of the tumor exerts little influence over the appearance of the papillitis.

4. The size and nature of the tumor exerts but little influence over the production of the papillitis.

5. Tumors of slow growth are less inclined to be accompanied with optic neuritis than those of rapid growth.

6. It is probable that unilateral choked disc is indicative of disease in the hemisphere corresponding to the eye involved.

7. It is doubtful whether increased intracranial pressure is solely and alone responsible for the production of an optic neuritis in cases of brain tumor.—*The Philadelphia Medical Journal.*

"SOUTHERN MEDICAL RECORD."—Articles on "Points in Surgery and Medicine" have a character somewhat peculiar to this monthly. The editor seems to have a way of his own in managing his matter, and giving his magazine a special character.—*Phrenological Journal.*

Selections and Abstracts.

THE DOCTOR IN COURT.

By GEORGE L. REINHARD,

Ex-Judge Appellate Court of Indiana, Acting Dean of Department of Law, Indiana University, Bloomington.

There is a general impression abroad that somehow lawyers occupy a more favorable position in court than other professional men. Of course the lawyer in the practice of his profession occupies a peculiar official relation to the judge, which he does not occupy when he appears in court as a litigant or a witness. But in the latter relations he stands precisely on the same footing as the doctor or professional man whose occupation requires the exercise of special skill or knowledge. And so the liabilities and responsibilities growing out of the practice of medicine are much the same as those growing out of the practice of any other profession under similiar conditions and circumstances.

There are two ways, and only two, in which a professional man, whether he be a lawyer or a doctor, may be required to come into a court of justice, and they are, first as a party, and second as a witness. He may come into court voluntarily as a plaintiff to recover compensation for his services, or he may be brought in against his will, as a defendant. The doctor's appearance in the latter instances occurs most generally in cases of alleged malpractice.

Every physician and surgeon who attends a patient professionally sustains to such patient, or to his or her guardian, father, mother or husband, a contractual relation. It is in effect as if the responsible party had said, "Come and treat me for this disease," or "Go and attend my wife or child," or "Ward in this affliction or trouble. Do the best you can for him or her, and I will see that you are paid for your services whatever they are reasonably worth." The nature of the contract is precisely the same as that between an attorney and his client. In neither case does the professional man warrant or insure success, unless there be a special contract to that effect. No man is bound to undertake the performance of an impossibility. If a disease is incurable and the physician undertakes to cure it, he can not be held in damages for failure to cure, for that was beyond his skill to accomplish, even if he were among the formost of his profession. But if he guarantees a cure and does not perform it, he can recover no compensation, although it were impossible to perform such cure, for it was upon this condition alone that he contracted, and

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the law never undertakes to make a new or different contract for the parties from that they have voluntarily entered into. If the physician enter into such a contract he can not recover, even though he exercises the highest skill, ability and care in the treatment.

The lawyer may undertake to forclose a mortgage, or the surgeon to remove a limb, or the physician to treat a disease successfully, and if he thus warrants success, he can recover nothing if he fails, for it was his own fault that he assumed such an obligation. In the absence of such warranty, however, he will be allowed a reasonable compensation for his services. To this there is but one exception. If he fails to possess the necessary skill and to exercise the necessary care required in such circumstances, and injury results, he not only loses his compensation, but he renders himself liable to an action in damages for any injury sustained by reason of his ignorance or want of proper care.

Every professional man who holds himself out to the world as such, impliedly warrants that he has the required knowledge and skill, and will exercise the required care in the case in which he is employed. Every doctor who undertakes to treat a patient, impliedly contracts that he possesses the skill, ability and experience ordinarily possessed by those who practice the same profession. In the language of Justice Story: "In all these cases, where skill is required, it is to be understood that it means *ordinary* skill in the business or employment which the bailee undertakes, for he is not presumed to engage for extraordiary skill, which belongs to a few men only, in his business or employment, or for extraordinary endowments or acquirements. Reasonable skill constitutes the measure of the engagement in regard to the thing undertaken." And as Lord Chief Justice Tindall says: "Every person who enters into a learned profession undertakes to bring to the exercise of it, a reasonable, fair and competent degree of skill."

But it may be, and often is, a difficult matter to determine what is an "ordinary degree of skill." To determine this is to determine the standard of the profession. In some localities a much higher standard exists than in other localities.

In sparsely settled neighborhoods the physicians are scarce, and may have to be brought for a distance of many miles to the bedside of the sick. In such cases the patient impliedly engages that he will be satisfied with the best treatment which may be given him under the circumstances, and hence the same skill and experience would not be required as in a large city, where physicians are found in great numbers, and where medical schools and other facilities afford constant aid for improvement. It may be stated, therefore, with some degree of certainty, that a damage suit for malpractice is a more

dangerous thing to the city physician than it is to the doctor of the small town or village or country settlement.

The standard of any profession anywhere is just what the members make it. The high-minded physician or lawyer, or other professional man—the man who has at heart the good of the community, as well as his own success, will always strive for a higher standard. Fortunately for your profession in this State, you have succeeded much better in securing the aid of the law in the elevation of its standard than we lawyers have in ours. Suppose there were such a thing as a constitutional provision that every person of good moral character, being a voter, shall be permitted to practice medicine, without any other qualifications, just as we have a constitutional provision that every person of this description shall be allowed to practice law. In that case a merciful Providence alone would be able to save the poor patients. But it is equally important that one should possess something more than a good moral character to practice the profession of law, where he may have in his keeping the lives and fortunes of those who come to him for advice and for services. But as no constitutional provision has stood in your way, you have steadily forged ahead, until now in Indiana the standard of the medical profession, I am ashamed to acknowledge it, has risen to a much higher plane than that of my own. Upon this achievement you are to be congratulated, and we can only hope that the time is not far distant when the Legislature shall have the right to pass a law requiring corresponding skill and experience in the practice of the legal profession.

But the physician and surgeon impliedly undertakes something even beyond the possession of ordinary skill, experience and ability. He also impliedly undertakes to use reasonable and ordinary care and diligence in applying the skill and ability of which he is possessed, for if he is ever so well informed, if he has had the very best of medical training, and the ripest of experience, yet if he is negligent and careless in the treatment of his patient, and injury results, he will be liable in damages. It will be noted that it is not *extraordinary* care and diligence that he undertakes to exercise, but only ordinary care and diligence, or, in other words, such care and such diligence as a reasonably prudent physician or surgeon would exercise in the same circumstances. The law will not hold a physician or surgeon to the exercise of the highest degree of care and skill, any more than it will hold the lawyer or other professional man to such exercise although morally they may both be bound thereto.

The doctor also undertakes, impliedly, to exercise his best judgment in the treatment of the disease. Whenever the physician or surgeon applies his best judgment in both diagnosis and treatment, it is all that can be reasonably required

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of him, it being of course presupposed that he possesses the skill and is exercising the degree of care and diligence already referred to. What is good judgment may, of course, not always be clear. But the physician and surgeon is not responsible for the errors of his judgment, provided the same is properly enlightened according to the facilities afforded the profession in his community.

Sometimes it is an error of judgment to amputate a limb, and the patient loses such limb as a result of such error. At other times the exercise of judgment may be erroneous in not performing an amputation when it should be performed. In either case, if it be a mere error of judgment and not due to rank ignorance or want of proper care, the physician or surgeon will be excused.

Another rule is that whatever is well and clearly settled must be known to the practitioner and must be applied by him.

Thus, if a patient's disease were such as knowingly required opiates in its treatment and the doctor were to prescribe *belladonna* and an injury should result, the physician would be liable. And so if amputation were clearly required and the surgeon failed to perform it he would be obliged to respond in damages.

But the patient also has a duty to perform. He must follow the directions of the doctor. In other words, he must "take his medicine," and if he fails to do so he can not hold the physician accountable. "Nothing can be more clear," says the Supreme Court of Pennsylvania, "than that it is the duty of the patient to co-operate with his professional adviser, and to conform to the necessary prescriptions; but if he will not, or under the pressure of circumstances he can not, his neglect is his own wrong or misfortune. No man may take advantage of his own wrong, or charge his misfortune to the account of another." But a surgeon can not delegate the duty of dressing or caring for wounds to incompetent nurses or attendants, and if he does so, it is at his own risk. "He must either dress the limb himself, or see that it is correctly done." The same is true of administering anesthetics in cases of surgical operations. If he leaves this task to an unskillful and careless attendant when he is the surgeon in charge, he will be responsible for the results.

The law also requires the physician or surgeon to devote as much time to the treatment of his patient as is reasonably necessary. It will not do for him to neglect one patient, in order to be at the bedside of another. Hence you may say that it is against the law for a doctor to have too many patients. Neither will he be allowed to go in pursuit of other callings and leave his patients unattended. He should devote his entire attention to the practice of his profession. He must

not have too many irons in the fire. This is, of course, equally true of the attorney or other professional man, whose duties require him to remain at his post. He must fulfill his professional engagements at all hazards. And so it were better for the physician who has too much other business to attend to, so that he can not devote the greater part of his time to his profession, to abandon it entirely in order to rid himself of the consequences which will be likely to follow his negligences in case he undertakes to serve too many masters.

You will, of course, not expect me, and I certainly have not the capacity, in this short paper to give even an outline of what the physician or surgeon must do to escape the ordeal of a suit for malpractice. To do so would indeed be equivalent to writing a treatise upon the duties of the doctor to his patients, a task which is far more adapted to your profession than to mine. But it may not be out of place to state that in the application of legal principles to the science of medicine and surgery, the employment of a reasonable amount of common sense is a most exeellent criterion. If the professional man in the discharge of his duties as such will only act conscientiously and give his patient the benefit of all his skill, energy and reasonable care, he will rarely be liable to commit a fatal error, or one for which the law will hold him accountable in damages, provided always, that he has the necessary ability and training that fit him for a reasonably successful career in his profession.

But perhaps the more important business for which the medical man or surgeon will find himself invited into court, is not in his own but in some other person's lawsuit or case. Some other medical man or surgeon has a case of malpractice, or a claim for services, or some one is being prosecuted for a crime and the doctor is summoned into court as a professional witness, and unless he understands pretty well the underlying principles of medical jurisprudence, or knows something of the rules governing a court in the conduct of a trial, such as this, he will be laboring under great disadvantages, however eminent he may be in his profession.

"The whole subject of medical evidence," says Professor Elwell, "has been too much neglected by the medical profession at large. The witness stand should be the arena upon which the scientific man should gladly appear, as the public vindicator of justice; thereby defending and vindicating his own noble profession from the discredit brought upon it by the illiterate hangers-on who claim to represent it, but do not any more truly than does the miserable pettifogger truly represent the high-minded, intelligent and honorable lawyer."

But instead of this condition of things it is well known that the expert witness of late years is becoming more and more a tool for the lawyer or litigant to establish some pet theory in

a case. Unfortunately it is too true that one can prove almost anything by an expert witness. For this purpose the witness is coached and drilled beforehand, so as to be able to meet the particular emergency for which he is wanted. If it is understood that "his side" desires to prove that a stagnant pool will produce malaria it is easy for him to furnish the evidence. If, on the other hand, it is desired to show that a pool of water, though stagnant, will absorb, and thus abate malaria, it is easy enough to find a witness who will prove it.

The genuine medical witness should never take into consideration the fact that "his side" would like for him to testify so and so. He should pass upon questions of a professional character and give his opinion much as a judge decides a case, free from bias, and indifferent as to whether the result benefits the one side or the other.

Dr. Coventry in a report to the American Medical Association, made many years ago, makes the following wise suggestions to the medical witness:

"*First.* He should listen attentively to the testimony, as to all the facts in the case, and avail himself of every authentic means of forming a correct opinion.

"*Second.* He should studiously guard against being biased, either by popular clamor or because he is called by one side rather than the other. He is to form his opinion exclusively from what appears in evidence, excluding, as far as possible, any previous prejudice, or what he may have seen in the papers or heard from rumor.

"*Third.* The medical witness is not to take into consideration the influence which his testimony may have on the prisoner at the bar, or the case under consideration, if he is testifying as to facts. If it is a matter of opinion, drawn from the facts, he should state it honestly; but if he has doubts, he should express them.

"*Fifth.* A medical witness should not assume the province of the jury, as to say a particular wound was the cause of death; he should only state what would be the ordinary effect of such a wound; or in a question of insanity, that the testimony given was an evidence, or was not an evidence, of insanity.

"*Sixth.* The medical witness should have his mind fully prepared before taking the stand as to what he can testify to, and his reasons, if they are required. He should, in his testimony, avoid, as much as possible, the use of technical or professional terms, which the jury would not be likely to understand; but, if unavoidable, then their meaning should be explained to the jury. In giving his testimony, he should keep cool and collected, and not permit himself to be irritated or confused by the counsel, and should avoid introducing any expression of opinion not immediately connected with the cause before the court."

I am of opinion that perhaps the last of these suggestions is the most important. Too much emphasis can not be placed upon the necessity of thorough preparation upon the subject in hand. The lawyers who conduct the examination on both sides will be apprised of the trend of the medical testimony in advance, and if they are men of standing in their profession, you may rest assured that they will be thoroughly informed. If you are not sure of your ground, the cross-examination will be a most trying ordeal to you, and it would have been far better for your reputation if you had not gone upon the witness stand.

Another thing which Dr. Coventry suggests can not be too often and too strongly recommended, and that is the avoiding of the too frequent use of technical terms. There is a tendency among all of us to exhibit a desire to display what we know professionally, but it always has a result opposite to what we expect it to have. It is just as easy to say the man was unconscious, as to say that he was *comatose*, and it will be much more easily understood. A witness who is plain and common-sensed in his conduct on the stand, who avoids all attempts at ostentation and display of learning, will always secure the respect of court and jury, and carry conviction to his hearers.

The necessity of keeping cool and collected, too, is of great importance to the medical witness, and ought to be kept constantly in mind by him. He should never allow himself to become confused or irritated by the questions of counsel. If any question is asked him which he is unable to answer, he should frankly say so, and not get himself more deeply into the dilemma by any attempts to explain what is not clear to him. If the question is obscure or ambiguous, he should ask the counsel to make it clear. He has a perfect right to this, and the court will always accord to every witness the rights which are due him. Even if counsel are guilty of impertinence or insolence to the witness, he can better afford to keep cool than to make a display of temper, for by the former course he always gains sympathy and approval, while by the latter he loses it. It is sometimes very difficult for expert witnesses to understand why certain questions are allowed to be asked of them by the court. It appears to them that such questions are a reflection upon their integrity and honesty. While lawyers doubtless frequently overstep the boundary of propriety in asking such questions, the court is not always at liberty to suppress them, as they may possibly lead to something throwing light upon the witness's capacity, fitness or candor, and if the court rules the question proper, it is the part of wisdom for him to answer, even though it involves to some extent an assumption of a fact which, if true, would be to the witness's discredit. The wit-

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ness can well afford in such case to let the court and jury decide whether there is any occasion for the insinuation of the interrogating lawyer, and he will leave the stand with more credit than he would if he were to stop and quarrel with his questioner. Sometimes lawyers are desirous that the witness should become irritated, and should flounder, and if he does so, they have accomplished just what was desired. The professional witness will therefore often help his cause more by submitting to what seems to him is an indignity, than by refusing to answer or by answering evasively or curtly. Of course, no judicious judge will permit the witness to be badgered and harassed by foolish and impertinent questions. The witness should never lose sight of the fact, that it is the court and not the counsel, to whom he is responsible, and to whom he must look for guidance, and his entire conduct should be with this end in view. He can safely appeal to the court for protection if he needs it, but a too frequent exercise of this privilege will not be beneficial to him, if the court should happen to rule against him. As said by a standard writer: "The counsel who improperly invades the domain of a witness, either to embarrass or abuse him, will receive no sympathy from a court or jury, if the witness maintains a dignified manhood; but, on the other hand, such counsel will most certainly prejudice his client's cause, and impair his influence with the jury and court."—*The Medical and Surgical Monitor.*

SOME OF THE DRUG CONDITIONS DURING THE WAR BETWEEN THE STATES, 1861-65.

BY JOS. JACOBS.

Here, in grand old Maryland, this border State of the bygone Confederacy, at a time when men of that war generation who fought on either side of a great and memorable conflict meet with the sons of both in friendly conference, at a time and place where none can be stirred to animosities by recalling the subject, I present a paper relating to the drug trade and drug conditions as they appeared during the War of 1861–65, especially as they existed in the Southern States.

Whatever may be the final verdict of mankind as to the justice of the cause for which the seceding States engaged in warfare with their kindred commonwealths, it must follow the recorded admission of the heroism and magnanimity of the Southern people in maintaining that brave struggle in arms against the proud and wealthier section of our common country; and, just as sure as that now the old soldiers of the South and their sons stand as ready to answer any call of our splendid Union of States against any and every foe, as the old soldiers of the North and their sons, just as sure are the hearts of all willing to still all sentiments in reference to the old conflict of arms, excepting such as spring from pride in the valor of those who wore the blue and those who wore the gray.

There are few American citizens, to-day, who would not rejoice if the bloody record of that war, with its story of suffering and death, had no place in our history. Would that we, as brother Americans, had never been compelled to witness any of the scences or consequences of that sad conflict, and that our children should never have been called upon to turn the pages of its annals.

We can not doubt the existence of genuine reconciliation now, since the calls that have so recently assembled our gallant boys from every State in our Union, and who, mingled together, have illustrated the common valor of Americans in arms against the Spanish hosts, and whose acts of heroism are now recorded in never-dying lines that shall commemorate the worth of North and South, and East and West, alike.

As pharmacists, rejoicing in the existence of a truly re-united country, we should recognize that we must ever stand ready to do our part should foemen ever invade our territory, standing true and firm though we should be isolated from all the nations of the earth; and so, looking back over the days of the war between the States, I have endeavored to see if there were not some lessons to be learned from the adversities in which the Southern people found themselves in the matters that particularly relate to our profession. For, when a peo-

ple is put to straits and when overwhelming necessities confront them, invention is stimulated, experiment prompted, and out of their very helplessness, often, intelligence is aroused and action follows which evolves new and valuable accomplishment.

The Southern people prior to the war were almost exclusively an agricultural people. The broad acres of the South yearly whitened in fleecy cotton, or waved with yellow grain, or sent forth from their soil the cane and rice harvests, or pastured the flock within their confines. At the beginning of the war, except at Richmond and a few other of the more northerly cities, there were very few machinery plants, and the factories and foundries which produced articles of cotton or wool or brass or iron and steel, were small in number and in the extent and variety of their productiveness. The splendid water-powers of the Carolinas and of Georgia that now mingle the music of their falling with the hum and whirr of textile mills, wasted over their rocks as they ran to the sea by the cotton fields in the broad, alluvial valleys. Boats that ran up the Mississippi and the Ohio were laden with the cotton and wheat of Texas and the sugar and syrup of Louisiana or the imported products of the Mexican Gulf countries, and they returned freighted with coal and iron and all the varied manufactured products of the North and East. Tennessee, Arkansas, North Carolina and Virginia were dotted with granaries and tobacco barns, and sent their "cattle" from a "thousand hills" into the markets of the country. Florida and Mississippi were largely engaged, besides in the production of the usual Southern crops, in furnishing the fruits of their orchards and the output of their fisheries to commerce The inexhaustible beds of iron ore and manganese and coal of Georgia and Alabama and Tennessee were still unexplored, and the vast quarries of Georgia marble and granite, now yielding rich profits to Northern investments, were then overlooked and unworked.

It can be imagined that a territory like this, unprepared for war and sustaining an ignorant slave population which amounted to at least two-fifths of the whole number of persons, suddenly confronted by an armed conflict and at once invested by vigorous, watchful and competent blockading fleets, full of natural resources, deficient in organized industries, rich in the possession of men of intellect and executive capacity, would be met by a situation calling forth every talent and resource of its people.

Side by side in the columns of the newspapers, with the stirring appeals to patriotism in editorial language and poetic meter, were official orders and advertisements; and scientific and literary men vied with one another in publishing suggestions and hints and descriptions of processes that would be

useful in directing the minds of the people toward solving the problems of supplying necessary munitions of war and all the articles for camp and field and hospital and household use.

To say nothing of the destruction of property and of the whole labor system of the South with its attendant losses, some idea of the extent of the effects of that war may be gathered by reciting a few facts from official data.

Eleven out of the thirty-four States seceded. The men of military age from eighteen to forty-five on the Southern side numbered 1,064,193, including lame, halt and blind, etc. On the Union side were more than four to one, or 4,559,892, not estimating monthly accessions from the world at large. In enlisted men the numbers were, for the South, 600,000; for the North, 2,865,000. The slave States of Kentucky, Missouri, Maryland, West Virginia and Tennessee gave to the Union 300,000 men. Thus there were in the field four armies of the North, each as large as the entire Confederate forces, not including the 300,000 men contributed by the slave States.

In numbers the Federal loss was 67,058 killed and 43,012 died of wounds; of Confederates, 53,873 were killed, and 194,026 was the number of killed and wounded on the fields of battle. More than one-third of the Confederates were confided to the surgeons, besides the sick and wounded prisoners of war.

The Confederate government, immediately after the formation of a provisional government at Montgomery, were confronted by strong facts and large figures as to supplies for the different departments. Agents were sent at once to Europe, most of whom were in London, and where they established a weekly newspaper, with local correspondents in nearly every Southern town from Virginia to Texas. Instructions were given that, as there were only two sources of supply, capture and blockade running, importance was to be given to securing first, arms and ammunition; second, clothing, including boots, shoes and hats; third, drugs and chemicals, such as were most pressingly needed, as quinine, chloroform, ether, opium, morphine, rhubarb, etc. These agents were instructed to see that all blockade runners or any transport ships, barks or brigantines, that were clearing for Southern ports for cargoes of cotton or naval stores, were loaded with the above enumerated articles; the cargoes to be consigned to individuals, firms or agents of the government at any port to which they cleared.

At the outset of the struggle the question of drugs and medicines was thus third in importance, and the druggists of the South had either to manufacture what they could from native barks and leaves and herbs and roots, or purchase at Southern ports such supplies as the blockade runners brought in that were not intended for the government. In most cases

these cargoes were offered at auction. This was a custom at Galveston, New Orleans, Mobile, Charleston, Pensacola, Savannah and Wilmington. The gulf cities received large supplies from Cuba; while in Texas there was almost a continuous train of contrabanders, or smugglers, bringing goods across the Rio Grande from Mexico, but not much of this was medicine.

As to capture, while the army frequently captured the wagon trains of the enemy, thus obtaining some supplies of medicines and surgical appliances, these were barely sufficient to supply the most distressing needs in the army; so it may be seen that home manufacture and blockade running were the only source of supply during nearly four years for between six and seven millions of people.

The interior towns suffered most; such places as Jackson, Meridian, Columbus and Aberdeen, in Mississippi; Selma, Montgomery, Eufaula, Huntsville, in Alabama; Albany, Columbus, Macon, Augusta, Athens, Rome and Atlanta, in Georgia; Spartanburg, Greenville and Columbia, in South Carolina; Fayetteville, Goldsboro, Raleigh, Statesville and Charlotte, in North Carolina; and Danville, Lynchburg, Petersburg and Richmond, in Virginia. In nearly all of these towns one or more druggists manufactured from stock on hand of roots, herbs and barks, or from home supply of such medicinal plants as he could secure, tinctures and like preparations.

The supply of whisky was not so short as that of medicines. The so-called "moonshiners" of the mountains of North Carolina, Tennessee, Alabama and Georgia kept their stills (often made of gum logs) running night and day, and could find a ready sale for all they produced. So far as I can learn, no tax was placed on whisky. In New Orleans rum was made from molasses, one distillery turning out over one hundred barrels of this product every day for over a year.

Amongst the scarcest articles in a drug store in those days were paper, twine and corks. Some of the stores obtained old life-preservers fom abandoned river boats and got a supply, thus, of hand-cut stoppers. Various fabrics were pressed together for small stoppers, and for large bottles, demijohns and jugs, different sized corn-cobs commanded the same price as XXX corks do to-day. In the museums of New York, Washington and Chicago can be seen some of the specimens of attempts to manufacture glass bottles in Louisiana, Alabama and South Carolina.

In the interior districts and small villages the country doctors returned to first principles and to the use of the plants of the fields and forests; and these agencies were about all they had to rely on, outside of whisky and a little quinine, the latter frequently at $100 an ounce.

Interviewing one of our old Confederate surgeons, he said:

"During the early part of the war I was placed in charge of a railroad hospital in a small town where it was difficult to obtain medicine at almost any cost, and as I had my little hospital crowded nearly all the time, both with employes of the road and wounded and sick soldiers, afflicted with various diseases and all kinds of wounds and injuries, and being also engaged in general practice, it naturally followed that my mind was severely taxed in order to supply remedies and substitutes to meet the demands of such varied practice. I perused my dispensary and called into requisition an old botanic practice that had been handed down as a relic of the past, but from which I confess to have received valuable aid and very many useful hints in regard to the medical virtues of our native plants. I give you the following facts from a record I kept of the patients treated, and the remedies I used, and the principal substances I resorted to.

"Of that large class of medicines, so useful in surgery and so much in demand in war times, called antiseptics, most of them, I may say, have been discovered and appropriated to surgical use since our war. In fact, I had but little else at my command except the cold-water dressing for wounds. From experiment I learned to improve on the plain old method, as I think, by employing a decoction of red-oak bark added to the water, which acted as a disinfectant, and by its stimulating and astringent properties promoted the healing process. I also used a weak solution of bicarbonate of soda, which I found beneficial in the suppurative stages. When emollients were indicated, I used slippery elm and wahoo root bark, and solution of common salt often helped. In case of great pain I employed poppy heads, nightshade and stramonium.

"I had a number of cases of intermittent fever. I would give strong boneset tea, warm, until free vomiting was produced, and as a substitute for quinine I used, during the intermissions, butterfly root or pleurisy root tea, which would nearly always cut short the febrile stage.

"Remittent or bilious fevers were treated much the same way, except that I invariably gave good doses of mandrake tea in the beginning. White ash root or prickly ash root were often given in these fevers to advantage, using always the butterfly-root tea in the febrile stage. Virginia snake-root, yellow root, or Sampson's snake-root acted nearly as well, but I preferred the other. If I could have obtained blue mass or calomel I would have begun treatment with a dose or two of that, but none were to be had.

"May-apple root or peach-tree leaves made into a strong tea and drank warm would act on the bowels as certainly as senna; but with children, where too much tea is not desirable, I often gave beef's feet oil, hog's feet oil, or even lard heated with syrup.

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"In cases of pneumonia, pleurisy, catarrhal fevers, etc., I made local applications of mustard seed or leaves, stramonium leaves, hickory leaves, pepper, etc., warm, and gave alternately butterfly-root and sanguinaria, and continued to slightly nauseating, from day to day (no need of anything else). The two last-named remedies took the place of Dover's powder, quinine and all other diaphoretics, febrifuges and arterial sedatives.

"Phytolacca or poke was another favorite remedy—the tincture, when alcohol or whisky could be obtained; otherwise, tea of root or berries. I used it in all cases of chronic rheumatism or neuralgia, enlarged glands, scrofula, syphilis, and all cases requiring alteratives, often combined with American sarsaparilla root, sassafras, alder and prickly ash.

"Female complaints gave me some trouble, but I soon learned the use of black haw, squaw-weed, partridge berry, etc. I had been taught in the old text-books that opiates in large doses would control some cases of threatened abortion, when the patient had not lost too much from hemorrhage. I found that the black haw root tea would absolutely stop this tendency, not only in cases where there was but little hemorrhage, but where large quantities had passed, and would relieve the most severe case of dysmenorrhea, especially when combined with squaw-weed, partridge berry or red shank.

"In stomach and bowel diseases I found but little difficulty in obtaining plenty of substitutes for opiates, astringents and the like; in fact, I believe that an all-wise Providence has especially provided the best antidotes in creation on the hills and dales and by the vales and streams of our own Southland. In ordinary looseness of bowels or diarrhea I gave an infusion of raspberry leaves or whortleberry leaves (both of which act finely on the kidneys and bladder). Where there was nausea or sick stomach, a handful of peach-tree leaves steeped in water and drank will settle it, or what is perhaps better, the kernels of two or three seeds cracked and cold water drank off of them. If stronger astringent is necessary, the inner bark of red oak, blackberry or dewberry root tea, or red shank root, are sure remedies.

"Agrimony tea, and, as a last resort, the nut-gall or ink-ball made into what, from its color, I called black wash (made by squeezing the juice out and adding a little copperas). This black wash is not only a splendid ink, but is a destroyer of syphilitic sores, warts, corns, ringworm, and old ulcers and excresences of nearly every kind, much superior to lime-water and calomel. Weakened properly, it is good in obstinate bowel diseases, and can be used as an injection in gonorrhea, gleet, etc. Silk weed root put in whisky and drank, giving at the same time pills of rosin from the pine tree, with very small pieces of blue vitriol, will cure obstinate cases of gonorrhea, and is a substitute for copaiba, cubebs, etc.

"I raised lobelia from the seed, and found it to be a reliable emetic, useful in cough medicines, croup and asthma. I have relieved asthma with lobelia and by smoking stramonium leaves. We, of course, used turpentine as an adjunct in all cases where indicated, which is the case in very many diseases and in many a positive curative agent.

"Onions and garlic were useful as poultices in nearly all glandular enlargements, as are also poke-root, celery, pepper, parsley, sage, thyme, rue and other garden products. Many of the latter were used for diseases of women and children.

"White sumac, red elm, prickly ash, and poke, will in connection with my black wash cure recent cases of syphilis. It will also cure many cases of chronic rheumatism. Peach-tree leaves and Sampson's snake-root will cure most cases of incipient dyspepsia. Gargle made of sage and honey will cure most cases of sore throat, tonsilitis, etc.

"For infants, calamus, catnip and soot teas are better than soothing syrup with opiates."

Nearly every old practitioner in the South, to day, is full of such reminiscences as the foregoing.

Notwithstanding the restrictions on inter-state commerce and the almost exclusive reliance on blockade runners for supplies, many druggists in these Southern towns and cities displayed much ingenuity in the disposition of the stocks bought at auction at the seaports.

Mr. H. Metcalf, of Montgomery, relates that he attended an auction sale at Mobile on one occasion, and, arriving late, found the cargo all sold except cod-liver oil and beeswax, which he succeeded in purchasing. His two barrels of cod-liver oil and 600 pounds of beeswax were immediately reshipped to Montgomery on the Alabama river. Filling every shape and size bottle to be found, and placing a judicious advertisement in the papers, he was enabled to sell the oil, but what to do with the beeswax was a puzzler. Discovering a set of candle-moulds and using cotton yarn as a wick, he ran the entire mass into candles and succeeded in selling the whole stock at ten cents a piece.

Nashville fell early in the action, and there was but little suffering there on account of failure to obtain medical supplies. One incident is related there showing the shrewdness of druggists at Nashville. When it became known that all the manufacturing enterprises would be blown up on the evacuation of the town, a shrewd druggist went around and succeeded in buying all the window glass in town. Three days later the explosions, on the retreat of the Confederates, broke one-half the window glass in the city, and Mr. S. reaped a rich harvest from his corner in window glass.

Various small attempts were made to manufacture chemicals at Knoxville, Tenn., Greenville, S. C., Columbia, S. C.,

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Milledgeville and Macon, Ga., but, outside of producing a few gun-caps and nitre for making gunpowder and a few carboys of sulphuric acid for charging the torpedoes in Charleston harbor, very little was accomplished. Later on some small manufacturing was done at Richmond and Charlotte, but, owing to the want of machinery and proper apparatus, little was achieved. A blockade runner brought into Wilmington, N. C., a supply of apparatus for making sulphuric acid, which arrived only a few days before the city fell. Much might have been accomplished with this but for the fall of Wilmington, as the plant was said to be first class, and, it is said, was disposed of for a large sum to a Philadelphia manufacturer.

The excessive high price of quinine made its handling a profitable employment. Almost every means known to human ingenuity was employed to smuggle it through the lines. Small packages were placed in letters, which the Adams Express Company would guarantee for the sum of $2.00 to deliver to the post-office authorities at some point in the Confederacy. Officers speculated in it, buying and selling until this created a scandal almost equal to that of speculating in cotton, and it was finally stopped by a strong proclamation.

A large contraband trade was carried on by an almost continuous line of house-boats floating on the Mississippi river. When opposite Memphis the goods were either sent in at night or into the interior of Arkansas, where trusty parties soon disposed of the stock. The great bulk of this trade was sent out by traders and speculators in Paducah, Ky., and Cairo, Ill., and their main points of operation were Memphis, Tenn., Helena, Ark., Napoleon, Ark., and Greenville, Miss. In regard to Napoleon, very few of this generation ever heard of the town, nor can it be found on the maps of the present day; yet in war time Napoleon, Arkansas, was a town of nearly 3,000 people, well built with brick business houses, and contained a large United States marine hospital, built of brick; and situated as it was on the Mississippi, at the mouth of the Arkansas river, it was at one time a rival of Memphis for trade. This village was entirely destroyed by flood in 1869 or 1870; the last vestige of the large marine hospital was carried into the Mississippi river in 1874, and to-day there is not a human habitation left to show where Napoleon once flourished.

One of my Alabama lawyer friends, an ex-Confederate famous for learning, for valor as a soldier and for delightful humor as a raconteur, once related to me the following reminiscences:

To supply the trying necessities of the drug demand, he said he had heard of many amusing plans that were resorted to by the government itself, and by persons who were mainly prompted by neither impulses of humanity nor patriotism,

but by the simple desire of gain. He said he heard of a woman who went into the Northern lines four times, returning always with a considerable quantity of the more costly drugs concealed beneath her skirts. On her return from the fifth trip, however, some portion of her paraphernalia, while on a ferry boat, was caught in a way to put too great a strain on some string or buckle, so that it gave way, and the walking drug-store was brought down to "dire combustion."

A Mr. Berg, a merchant of Middle Alabama, says my Alabama friend, at the beginning of the war found himself with empty shelves and counters and no market from which to replenish his stock. He had had some experience in the sale of drugs and medicines, so he determined to occupy his genius, being too old to go to the war, by carrying on a contraband trade in this profitable direction. He started on a dangerous enterprise, as the South had interdicted trade in cotton and the North had placed the ban on drugs—especially on stimulating liquors. Mr. Berg selected Memphis as the base of his operations, and proceeded up to the northern part of Mississippi, a country alternately in the hands of the Confederates and the Federals. Here he purchased a common road wagon and four mules, and loaded the wagon with cotton. In a few days he arrived, with an assistant, within the Federal lines at Memphis, where he disposed of his cotton at war figures, for United States money. His wagoner, having received his reward, deserted, and Berg could find no one to go back with him to the South. He was about to abandon his enterprise of investing in drugs and medicines for lack of proper means of transportation, when he accidently, while looking after his own team and wagon, discoverd a two-horse vehicle, considerably battered and disfigured, but surmounted by a white cloth covering, over which was a small yellow hospital flag, and upon the sides of which was painted in large letters "Small-Pox." In a short time Berg had exchanged his four-horse vehicle for the smaller one, and selecting two of his best mules, hit upon the idea of transposing his hospital wagon into a blockade runner. He soon had a stock of quinine, morphine, ether and such other drugs as promised the greatest profit stored away in a box under the yellow flag, and over these he placed several layers of the leather fronts for making cotton and wool cards, over these some cheap clothing, and as a last layer scattered promiscuously a collection of such articles as are usually carried in a peddler's pack, including cambric needles. The enterprise might have been entirely successful had not Berg determined to add to his stock an eight-gallon keg of good rye whisky, then exceedingly scarce in his native region.

Berg proceeded on his return journey very slowly. The roads were bad, his team weak, and he inexperienced. The

yellow flag above his wagon and the legend on its sides accomplished fully all he had expected from them, so far as keeping him unmolested and preventing his contraband cargo from being detected. They were equal to the ancient cry, "Make way for the leper."

Berg himself also grew quite travel-stained, and to ordinary observation had but recently recovered from the small-pox. The end of the fourth day found his stock of provisions, both for man and beast, entirely exhausted, while every attempt on his part to approach a farm-house in order to obtain these necessities was met with threats and the barking of dogs, and he and his team went into a supperless camp. The next morning he concealed himself some distance from the highway, tied his mules out in a swamp to graze, and, having scrubbed himself up in a neighboring stream, started out afoot in hope of finding some farm-house remote from the highway where he might negotiate for provisions. Before starting, however, in order to fortify himself against the fatigue of the journey, Berg for the first time uncovered his hidden keg and drew off a bottle of its costly contents, drinking some of it before starting. An hour's wandering brought him at last to a farm which gave promise of creature comfort and refreshment. There was a woman in possession of the house as Berg approached, who forbade his coming any nearer than the gate, firmly and positively denying all his entreaties to save him from starvation. At last, however, she told Berg, who had so far forced his way into her presence that she detected the smell of whisky, that if he would furnish her a bottle of that article she would, in exchange, give him food for himself and his mules; and, as this was the only alternative, the bargain was made and she went to work preparing the provisions, while Berg returned to the wagon with the bottle she furnished. Berg had just finished his chicken and onions and bread, and the mules disposed of their fodder, and everything was in readiness for the journey to be renewed, when, with shouts and clattering hoofs, four blue-coated troopers rode up. In some way they had gotten hold of the whisky from the woman and learned from her the source of supply, and had tracked Berg to his camp. They had drank enough of the whisky to render them utterly indifferent to death or contagion in any form, and, while Berg was swearing he had no whisky, they were prying into the wagon and were emptying the keg through its bung hole into their tin-cups as freely as if it were branch water; and then they began to torment poor Berg with all manner of pranks and tricks. Finally, one of them determined to make him swallow a paper of the cambric needles, and had actually placed them on his tongue, handing him a cup of his own whisky and threatening to cut him down with their swords unless he swallowed the needles with a draught of the whisky.

Berg said that at that momemt he lost consciousness, and did not ever know whether he swallowed the needles or not; that when he awoke a man was bending over him asking what was the matter with him. The shouts of the drunken soldiers had attracted the attention of a party of Confederates, who, coming up unawares, had killed two of Berg's tormentors and wounded one severely, allowing only one to escape.

In such conditions as these, it is not to be wondered at that every kind of makeshift and substitution had to be resorted to in the field, in the drug store, and upon the farms and in the household.

Many times the Confederate soldier marched and camped and fought on half rations. The full ration was meagre enough. As prescribed, it was as follows: ¾ lb. of pork or bacon, or 1¼ lbs. fresh beef; 18 oz. bread or flour, or 1¼ lbs. corn meal. On campaigns or marches or on transports the ration of hard bread was one pound.

The following will give an idea of the economy that was enjoined in the matter of supplying general and post hospitals, the amounts stated being quantities for one year for one thousand troops: Acetic acid, 5 lbs.; arsenic, 5 ozs.; muriatic acid, 8 lbs.; suphuric acid, 8 lbs.; tartaric acid, 16 lbs.; sulphuric ether, 16 lbs.; alcohol, 192 pint bottles; ammonia, 5 lbs ; nitrate of silver, 8 ozs. assafœtida, 32 ozs.; camphor, 16 lbs.; catechu, 5 lbs.: ceræ albæ, 16 lbs.; chloroform, 8 lbs.; copaiba, 40 lbs.; creosote, 16 ozs.; adhesive plaster, 40 yards; extract belladonna, 16 ozs.; fluid buchu, 8 lbs.; columbæ, 8 lbs.; gentian, 8 lbs.; glycyrrhiza, 48 lbs.; hyoscyani, 16 ozs.; rhei, 8 lbs.; sarsaparilla, 16 lbs.; senna, 8 lbs.; valerian, 64 ozs.; mercuric chloride, 5 ozs.; iodine, 16 ozs.; ammonia, 32 lbs.; magnesia, 5 lbs; sulphate morphia, 16 drs.; myrrh, 5 lbs.; opium, 5 lbs.; ether, 5 lbs; jalap, 32 ozs.; cantharides, 16 ozs.; aloes, 32 ozs.; sulphate quinine, 80 to 160 ozs.; sugar, 160 lbs.; strychnia, 8 drs.; digitalis, 32 ozs.; unguenti hydrarg., 8 lbs.

The same sparse quantities were applicable in hospital stores' regulations and in the matter of surgical instruments, books, bedding, furniture, dressings, etc., and on the blanks furnished was printed the following: "It is urged that medical officers make requisition for such medicines only in the following table as are deemed *indispensable*."

Dr. J. Julian Chisholm, professor of surgery in the Medical College of South Carolina, published in 1861 his "Manual of Military Surgery for the Use of the Surgeons in the Confederate Army." This book was widely used, and was a most valuable contribution to war surgery, containing, as it does, a most exhaustive collection of hints and instructions relative to the treatment of sick or wounded men in camp, on the field of battle and in the hospital. In his preface he says (in part)

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as follows: "As our entire army is made up of volunteers from every walk of life, so we find the surgical staff of the army composed of physicians without surgical experience. Most of those who compose the staff were general practitioners, whose country circuit gave them but little surgery and seldom presented a gun-shot wound. Moreover, as our country had been enjoying an uninterrupted state of peace, the collecting of large bodies of men and retaining them in health, or the hygiene of armies, had been a study without an object and therefore of little interest."

From my friend, J. F. B. Lillard, of New York, I learn the following names of some druggists who were in business at the South during those trying times: Benjamin Ward, of Mobile; H. Metcalf, at Montgomery, Ala.; J. A. Lee, New Iberia, La.; N. O. Mior, Columbia, S. C.; Jno. Ingalls, Macon, Ga.; J. J. Shott, Galveston, Tex.; F. S. Duffy, Newbern, S. C.; G. W. Aymer, Charleston, S. C.; S. T. Dernoville and A. H. Roscoe, Nashville, Tenn.; Robert Carter, Columbus, Ga.; A. Solomons, Savannah; Ga., Crawford W. Long, Athens, Ga.

To afford an idea of the prices ruling in Richmond, June, 1863, I append the articles in some original invoices purchased by R. W. Powers from Kent, Paine & Co. Some are as follows: 3 boxes ext. logwood, 47 ℔s. at $4.00 per ℔.; 1 keg bicarb, soda, 112 ℔s. at $2.75; 1 case brown Windsor soap, $12.75 doz.; 1 bbl. camphor, 86 ℔s., at $20.00; 112 ℔s. of blue galls at $4.00; 100 ℔s. tartaric acid, $2.25 per ℔.; salt, 44 cts. ℔.; hops, $2.50 ℔.; 1 cask French brandy, $52.00 gal.; Indian ink, 75 cts. bottle; 9 doz. assorted pencils, $4.00 doz.; phosphorus, $14.00 ℔.; citric acid, $4.50; oil peppermint, $16.50; Epsom salts, $3.87½; 6 bottles capsules, $6.50; 12 pewter syringes, $1.25 each; 2-box blue pills, $6.00; 1 bottle syr. ipecac, $10.00; 15 ozs. quinine, $22.25 oz.; 60 dr. morphine, $28.00 dr.; blacking, $1.40 per box; tallow candles, $2.37 ℔.

H. B. Metcalf, of Montgomery, wrote me in February last in part as follows:

"I find that all my old books and papers were destroyed in the fire of last July. We were able to secure some drugs and chemicals during the war by attending the blockade sales at Charleston and Mobile. We did not have to substitute to a great extent in putting up prescriptions—those of us who were fortunate enough to be supplied at the sales. We found great difficulty in securing vials and corks, and were compelled to use second-hand vials, and corks made from the tupelo tree answered very well. Prices were, of course, high; for instance, during the last year of the war all tinctures were sold at $1.00 an oz.; quinine, $25.00 per oz.; morphine, $10.00 per dr.; quinine pills, $1.00 each, and other pills $5.00 a dozen. Prescriptions ranged usually from $5.00 to $15.00. Whisky sold

at $150.00 a bottle. You must recollect that greenbacks were worth about twenty times our money, gold 100 times. I imported a great many goods through Evans' Sons, Liverpool, and regret exceedingly I now have none of the invoices."

It was quite an industry, I am told by an Atlanta lady, Mrs. Marcus A. Bell, for the country people to raise castor oil beans. The crushed beans were boiled and the oil skimmed off. She said that the grandmothers of those days revived the traditions of Colonial times. They made their own dyes and coloring matters from the roots and barks of native woods. Dogwood, sumac and the roots of pine trees were largely used, and indigo was cultivated in the gardens. Instead of paregoric, fennel-seed tea was given to the babies. For rash they used red-oak bark and alum. Goose grease and sorghum, or honey, was a standard remedy for croup, backed up with turpentine and brown sugar. Sassafras tea was given in the spring and fall as a blood medicine. Adults' colds were doctored with horsemint tea and tea from the roots of broom sedge. For irruptions and impure blood, spice-wood tea was given. Wine was made from the berries of the elder bush. For diarrhœa, roots of blackberry and blackberry cordial; and so, also, was a tea made from the leaves of the rose geranium. Mutton suet, sweet gum and the buds of the balm of Gilead was a standard salve for all cuts and sores. Balsam cucumber was widely used as a tonic, and was considered a specific remedy in burns. Catnip, elecampane, and comfrey root and pennyroyal were in every good housewife's pantry, in which, also, was the indispensable string of red peppers, a bag of sage leaves and of "balm." Calamus root for colic in babies was a common dose. The best known standard Georgia tonic was dogwood, poplar and wild cherry barks, equal proportions, chipped fine and put in whisky and taken wineglassful at meal times; it is still used in large quantities from "Yamacraw to Nickajack." In hemorrhages, black haw root was commonly used. All the white mustard we had was raised in our gardens.

She learned from these experiences that barks were best gathered while the sap was running, and when gathered the outer and rougher portion should be shaved off and the bark cut thinly and placed in a good position in the shade to dry; that roots ought to be gathered after the leaves are dead in the fall, or better, before the sap rises; that seeds and flowers must be gathered only when fully ripe, and put in a nice dry place, and that medicinal plants to be secured in the greatest perfection should be obtained when in bloom and carefully dried in the shade.

I here append a list of substitutes that were used by druggists and physicians during the war in large quantities, in most of the instances being the only medicines of the kind to be had.

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IMPORTED ARTICLE.	SUBSTITUTE.
Columbo Quassia	Yellow root.
Spanish Flies	Potato bugs.
	Powdered leaves of butternut.
Jalap	Wild jalap.
	Wild potato vine.
	Fever root.
Aloes	Wild jalap.
	Mulberry bark.
	Butternut.
	Dock.
	Wild potato vine.
	Amer. colombo.
Quinine and Peruvian Bark	Tulip-tree bark.
	Dogwood.
	Cotton-seed tea.
	Chestnut root and bark.
	Chinquepin root and bark.
	Thoroughwort.
	Spanish oak bark.
	Knob grass.
	Willow bark.
Digitalis	Blood root.
	Wild cherry.
	Pipsissiwa.
	Bugle weed.
	Jasmine.
Conium	American hemlock.
Opium	American hemlock.
	Mother-wort.
Sarsaparilla	Wild sarsaparilla.
	Soapwort.
	Yellow parilla.
	China briar.
	Queen's delight.
Chamomile	Dogwood.
Flaxseed	Watermelon seed.
Gum Arabic	Low mallows.
	Apple, pear and quince gum.
	Balm.
	Watermelon seed.
Ergot	Cotton-root.
Guaiacum	Boxwood.
	Poke.
	Prickly ash.
Ipecac	Wild jalap.
	Carolina hipps.
Mezereon	Prickly ash.
Kino and Catechu	Cranesbill.
Senna	Wild senna.
Colocynth	Alum-root.
Tannin	Smooth sumac.
Olive oil	Peanut oil.
	Beech-nut oil.
	Cotton-seed oil.
Laudanum	Hops.
	Mother-wort.
Acacia	Slippery elm bark.
	Sassafras pith.
Bougies	Slippery elm bark.

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Corks	Black gum roots.
	Tupelo wood.
	Corn-cobs.
Allspice	Spice-bush.
Pink root	Carindal flower.
Assafœtida	Wild chamomile.
Calomel	Dandelion.
	Pleurisy root.
	Butterfly weed.
Belladonna and Hyoscyamus	Jamestown weed.
Valerian	Lady's slipper.
Colchicum	Indian poke.

From various physicians, intelligent ladies, and from old Confederate magazines and books and newspapers, I have gathered the following data in reference to peculiar and unusual uses of articles that are incident to our trade, that seemed to be of more or less general employment in the South by physicians, druggists and in Confederate households.

Wood anemone was employed as a vesicatory in removing corns from the feet. Powdered may-apple mixed with resin was used a caustic in treating horses, the farriers using it for escharotic purposes. On the farms the juice of the pulp of the maypop seeds was made into a summer drink in place of lemonade. Powdered blood-root, snuffed up the nose, made a powerful sternutatory and was applied as an escharotic to fungus flesh. Pond-lily poultice was extensively applied to ulcers. Button snakeroot, or globe flower, was used largely as an expectorant and diuretic. Toothache bark (aralia spinosa) was used to allay pain caused by carious teeth, and in South Carolina the negroes relied on it almost exclusively for rattlesnake bite. Side-saddle or flycatcher was used in the various forms of dyspepsia. Ink was made from the rind of the pomegranate fruit and from poke berries. Where during convalescence an astringent tonic was indicated, dogwood supplied the need. This, with the blackberry and gentians and pipsissiwa as tonics and diuretics, and sweet gum and sassafras for mucilaginous and aromatic properties, and wild jalap as a cathartic, supplied the surgeon in camp with easily procurable medicinal plants, which proved sufficient in many times of need.

I here relate another reminiscence of my Alabama soldier friend, Col. Sumter Lea, of Birmingham, using his own language as near as I may be able to repeat it:

"I never heard of but one physician who was promoted on the field. The army once encamped at Tullahoma, Tenn., and obtained their water from a small stream which flowed as well as it could through a dense wood, where the leaves were as thick as in the 'vale of Vallambrosa.' The eddying pools were crystal, bright and clear, but disease and death lurked in their beautiful eddies, for bowel diseases were produced, unusually, among officers and men, and in the absence of any

pharmaceutical attachment to the army, it was without remedy until Dr. Cowan, attached as an assistant physician to a Tennessee regiment, adopted the use of what is now the famous 'tablespoon remedy,' consisting of a tablespoon of Epsom salt and equal quantities of bicarbonate soda and laudanum, this dissolved in water and taken a tablespoonful at a dose. This remedy acted magically, and being so widely adopted, attracted the the notice of General Forrest, who, out of admiration and gratitude, promoted Dr. Cowan to his personal staff, with rank of major. There was another doctor who ought to have been promoted for this same sort of service, for diseases of the bowels, during long encampments, became pestilential. The food, especially the bread, when prepared by the ordinary mess soldier, seemed to be especially invented for the production of irritation. Such camp-made biscuit would these days prove a successful rival and threaten the 'rubber trust.'

"An Alabama surgeon named Langhorne, with his hospital assistant, a good-natured fellow called 'Sonk,' grieving over these miseries, determined to find a remedy in his total lack of drugs for these multiplied woes, characterized under the synonyms 'diree' and 'diseremus.' After drawing largely on all their genius, they invented a pill composed of equal parts of red pepper and crude rosin, the latter of which they gathered from the near-by trees and which they consigned to immortality under the name of the 'Diseremus Pill.' It was amusing despite the sadness of the scene, to watch the doctor and his assistant, each with their cup full of their invention, going out to meet the weak and melancholy throng, who in answer to the surgeon's call emerged from their tents, morning after morning, and in single file marched wearily and languidly along, each in turn receiving in his feverish palm a dozen or more of 'Diseremus Pills,' with the laconic instruction to 'take two after each loose operation,' and even these instructions, when the tongue of the doctor grew weary with their constant repetition, was shortened into a sort of ejaculation as the pills were dropped, 'two after each loose,' until this grew into a sort of by-word about the camp."

The bark of the dogwood and swamp willow was mixed with tobacco for smoking. Watermelon juice was made into a syrup, and the rind into preserves. The seed of the watermelon and those of the gourd were used as a diuretic. Gourd rind was used as mould for buttons. The ladies of St. John's Parish, S. C., used prickly pear for hardening tallow in candle making, one pound to four pounds of tallow, taking the place of wax. The hand-leaved violet formed an emollient application. Red maple made an astringent wash.

In the process of dyeing it was found that maple and sweet gum barks with copperas made purple; maple, red oak and

copperas, dove color; maple and walnut, brown; sweet gum and copperas, nearly black; peach-tree leaves and alum gave yellow; the artichoke and black oak bark also gave yellow; sassafras root with copperas, a drab; smooth sumac, root and bark and berries, gave black; black-oak bark with a basis of alum gave a bright yellow; with oxide of tin, tints from pale yellow to bright orange; with oxide of iron, a drab; black-oak galls in a solution of vitriol made purple, which as it grows stronger, passed into a black; alum and alder, yellow; hickory bark and copperas, olive; hickory bark and alum, green; white-oak and alum, brown; walnut root and leaves, alone, black; blacksmith's dust was frequently used in place of copperas.

Buckeye lotion was used for gangrenous ulcers, and by some for the toothache.

Among the substitutes for coffee, at home and in camp, the following were a part: Rye, parched okra seeds, cotton seeds, parched sweet potatoes, parched corn hominy, peanuts. It was stated in printed articles "that half the coffee sold in New York and Boston the past twenty-five years has been composed chiefly of rye."

Cotton-seed decoction was used for inflammation in mucous passages. The roots of the cotton plant were employed in asthma, and by the negroes as an abortant. Soap was made from cotton seed by treating them direct with lye.

Among the substitutes for tea were Ceanothus Americanus, known as red root, or New Jersey tea, and holly leaves and blackberry and raspberry leaves and rose leaves.

The Amelia azedarach (China berry) furnished some valuable uses. The berries were employed in making whisky; the bark of the root used as an anthelmintic. The leaves were saved to prevent "botts" in horses, and were used to pack with dried fruits to preserve them from ravages of insects. A soap was made from the berries, called "Poor Man's Soap."

The ox-eyed daisy was used in place of Persian insect powder—an insecticide used as far back as 1857. In the country, fresh elderberry leaves were laid near the head of a bed-ridden person to keep away flies.

In the households and on the farms many interesting expedients were restored to. The newspapers were full of directions about soap-making and for preparing and obtainig the materials. The Richmond *Dispatch* and Wilmington *Journal* published minute directions for making soda from sea weed and corncobs, and recipes for making soaps.

Blackberry wine was used almost exclusively as a substitute for foreign wines, and some wine was also made from wild grapes and the berries of the elder bush. All the newspapers published recipes for making these wines, and there is scarcely a housewife in the South who does not know how to make them to perfection.

In the Mobile *Register* I find the following: "To alleviate the suffering and perhaps save the lives of many of our soldiers, when sickness may be traced to the use of unwholesome water in limestone regions, blackberry cordial is recommended. The following is a good receipt: Bruise the berries and strain through a bag; to each quart of juice add half a pound of loaf sugar, a heaped teaspoonful of powdered cinnamon, the the same of cloves, and a grated nutmeg; boil these twenty minutes, skimming well. When cool, add half pint of brandy for each quart, or add good whisky."

Compound syrup of blackberries was recommended and used as a vehicle for medicines. It was made by adding a half ounce each of cinnamon, allspice, nutmeg, cloves, to half a gallon blackberries. These were boiled twenty minutes in a kettle and strained through a piece of flannel. To this was added loaf sugar to make very sweet, and half pint of cognac brandy to two quarts.

A decoction of the blackberry root and the rind of the pomegranate fruit boiled in milk was a common remedy in diarrhœa.

The roots and leaves of the cockleburr were considered serviceable in passive hemorrhages, diarrhœa, gonorrhœa, and as a deobstruent in obstructions of the spleen and diseases arising from torpid liver.

One or two ounces of a decoction of Indian physic root (Gillonia trifoliata) was given as an emetic, the dose of the powdered root being thirty grains, persisted in until vomiting occurred.

The liquor called *piquette* was largely substituted for cider, wine and beer. It was considered to serve as a tonic, and tended to quench thirst. Directions for making it were as follows: Water was filtered through the pressed and fermented mash of grapes. The mashed grapes were put into a cask, pressed very full, and afterwards hermetically sealed and put in a cool place. When to be used, the head was taken out of the cask, water was added until the whole mass was moistened and water stood on the top. Thus, at the end of the fourth or fifth day the liquor could be drawn off for daily use, the place of the portion used being furnished by a new supply of water. In this way a cask of thirty-six gallons furnished about four gallons of piquette for about twenty days. Piquette was also made from pears, cherries, plums, figs and juniper berries. The rinds of oranges, lemons and aromatic plants, angelica roots, peach leaves, etc., were often added when the drink was too sweet.

Engravers found that the different woods were of hardness as follows: First, the wild currant or service tree and the apple and pear; next, the dogwood, redberry (azalea nudiflora), and kalmia latifolia; then the holly, when well dried; but of all, the boxwood was preferred.

The peach tree furnished a number of uses: The gum was used instead of gum arabic; a tea of the leaves given in whooping cough; the leaves used to season creams instead of vanilla; the leaves used in dyeing.

Beer was made from maize, the persimmon and the sweet locust.

Calycanthus (sweet shrub) was employed as an antispasmodic tonic in case of chronic agues, a strong decoction of the bark of the root or of the seed being given. It was noticed that the root was strongly camphorated.

As an antidote for poison oak the bruised leaves of the Collinsonia canadensis (stone root) were employed; as also the Verbena urticifolia.

Rhus glabra (smooth sumac) was used as a gargle for cleansing the mouth in putrid fevers; and a decoction of the root employed in gonorrhœa and gleet. A vinegar was made from the berries.

Beech-tree leaves, collected in the autumn in dry weather, were used for filling beds, the odor being grateful and they being very elastic.

Black oak was considered efficacious in leucorrhœa, amenorrhœa, chronic hysteria, diarrhœa, rheumatism, cynanche tonsillaris and asthma. The powder of the bark, mixed with lard, was a remedy in painful hemorrhoids, and used as a fomentation in prolapsus uteri and ani, and for deflections in these parts.

I quote from an article of Dr. Daniel Lee, in the *Southern Field and Fireside* of 1860: "It is poor economy for the South to destroy all its valuable tan-bark in clearing oak land, cutting rail timber and firewood, and thereby deprive our descendants of the power to manufacture their own leather. To send a million dollars' worth of hides to the North, have them tanned into leather, made into shoes, boots, saddles and harness for Southern consumption, is to pay about eight million dollars for the support of that Northern economy which never wastes the bark that grows on oak and hemlock trees, and that industry which turns this bark into gold." Such advice as the following was published: "Every farmer ought to save all the tan-bark that he can, for we speak advisedly when we say that the Confederate States are even now short of oak bark if they are to manufacture all the leather they are to consume in saddles, bridles, harness, saddle bags, buggy and carriage harness, caps and hat linings, book bindings, boots and shoes. Since the mechanical trades are essential to our happiness, we should encourage our sons to become scientific mechanics as well as farmers, lawyers, doctors, priests and soldiers."

As substitutes for hemp the following were used: The sunflower stalk, *Asclepias syriaca*, *Urtica diœcia* and *Yucca filamentosa*,

or bear grass. The juice of the skin of the blue fig made a red ink. Fig twigs were used as pipe stems. Rope was made of wahoo (*Ulmus alata*), and used in baling cotton. Wax myrtle (*Myrica cerifera*) was employed in making candles, and as a basis for fine soap. The soap was obtained from the berries by boiling and skimming. Four pounds of the wax made forty pounds of the soap, with the other ingredients counted. Candles made by the addition of grease are of a green color. Says the Charleston *Courier* of 1861: "We have been so long dependent on our Yankee enemies for soap and candles that we have forgotten that we can make them ourselves. To our shame, we admit that even on our plantations in the low country and seaboard there are abundant materials for making the best candles in the world, but millions of pounds have been permitted annually to decay unused. The low bush myrtle, indigenous to our coast from Virginia, *ad libitum*, south, the berries of which are now mature, will afford a supply of wax that, with the addition of one-third tallow, will furnish candles sufficient to light every house in the Confederacy for the next year. So, also, on every plantation, nay, in almost every kitchen, the monthly waste of ashes and grease, with the addition of a little lime and salt, and the labor of one person for one day, will make soap enough for our purposes. Now, why should we continue to pay the Yankees 30 cents a pound for soap and 60 cents for candles?" Candles in war time were made of resin. A model, economical candle, sixty yards long, was recommended for the camp and for plantation purposes; it was said to burn six hours a night for six months, and all was at a cost of only a few cents. One pound of beeswax was added to three-fourths pound of rosin, and melted together; four threads of slack twisted cotton was used for a wick, and drawn through the melted wax or rosin three or four times, was wound into a ball, which on pulling the end up and lighting furnished a good candle.

Among the recipes for making soap that were published in the Southern papers, I note the following: 1. Yellow or rosin soap: "Dissolve one pound of concentrated lye in half a gallon of water and three and a half pounds of fat or tallow and boil; put in three-fourths pound of powdered rosin, and let it boil down by constantly stirring until the soap sticks on the kettle and gets very thick. Put into a mould. 2. Hard fancy soap: Dissolve half pound of concentrated lye in two and a half pounds of hot water, and let cool; then melt by a low heat five pounds of clear fat or tallow; pour in the lye in a very small stream, and stir rapidly. Keep stirring until all has assumed the appearance of thick honey. Let it stand for twenty-four hours, when it will have set into a fine hard soap, which may be perfumed or variegated with colors by

stirring in the desired perfume or coloring matter, just before covering. 3. Soft soap: One pound concentrated lye and three gallons soft water and five pounds of fat or tallow. Boil until the mass grows transparent and all the fat has disappeared. Add fifteen gallons of water and boil a few minutes, and the soap will be ready for use.

In making gunpowder the lighter woods, such as willow, dogwood and alder charcoal, were recommended. I append an advertisement taken from the Augusta, Ga., *Chronicle* of 1862: "To Contractors—Willow wood wanted! 500 cords willow will be contracted for, to be delivered on the line of the canal at the government powder factory at Augusta, Ga., at the rate of not less than 100 cords a month, commencing 1st December next."

Out of the wood of the white poplar, split into shavings like tape or braid, the stuff called *sparterie* was made, used in the manufacture of hats. It was said that one workman with the aid of a child to carry off the shavings could keep a half dozen plaiters employed.

Shoes were made from canvas for uppers and tupelo wood for soles, for the negroes on the plantations. They had been patented, so it was said, by Henry Wyatt & Co., of New York, who offered wooded soled brogans for the negroes of the South. Ropes and baskets were made from the bark of the Canada leatherwood.

The following was published concerning the sassafras tree: "The sassafras wood stripped of its bark is very durable and strong, resists worms, etc. It forms an excellent post for gates. Bedsteads made of it are never infested with bugs. The pith of the young shoots and the leaves contain much mucilage and are used extensively in New Orleans to thicken pottage and in making the celebrated 'gumbo' soup.

"A cheap and wholesome beer for soldiers, or as a table beer, is prepared from the sassafras. Take eight bottles of water, one quart molasses, one pint yeast, one tablespoon of ginger, and one and a half tablespoons of cream tartar; mix and stir in an open vessel after standing twenty-four hours."

As far back as 1857 it was suggested in the patent office reports (says a Confederate publication), that the Pyrethrum would be found to answer the purpose of destroying insects, lice, etc., on plants and animals, and up to now, as far as I know, this has not been sufficiently experimented with.

W. Gilmore Sims wrote a friend that, "the persimmon beer made in Orangeburg, Dist., S. C., by Hon. J. M. Felder, equalled the best sparkling 'Jersey champagne,' or a carbonated cider. The old Southern song ran: 'Christmas comes but once a year, eggnog and 'simmon beer.'" It was customary to mash the fruit, strain through a coarse sieve, knead with wheat bran and bake in an oven. This persim-

mon bread could be put away for winter use in making beer when wanted.

Cloth was rendered waterproof, according to a published recipe, by adding to one gallon of turpentine two and a half pounds of beeswax. Boil well in a pot, remove from the fire, and while it is hot put in the goods. Saturate well and hang up to dry. Use one gallon of turpentine to eight yards of cloth.

A correspondent in the Charleston *Mercury* wrote from Waresboro, Ga.: "You speak of black moss for mattresses. Our common palmetto leaves, split into shreds with fork and hackle, boiled, dried in the sun a few days, make a light, clean, healthy and durable mattress. Let me suggest that palmetto pillows would be light and comfortable for our soldiers on the coast. Their corn and flour sacks, in the absence of anything better, furnished ready made pillow ticks. Our negroes are busily employed making light, durable and handsome palmetto hats for our soldiers. A bed made from the downy swamp plant which our people call 'cat's tail' took a premium at a late agricultural fair in South Carolina."

I enumerate a few more medicinal uses that were made of some of the prodncts of our Southern fields and forests by our physicians and housewives, and will close.

Phytolacca decandra, or poke, was largely used in diseases affecting the scalp, and in ulcers, irruptions, itch and hemorrhoids. Knot grass was considered a powerful astringent in diarrhœa and uterine hemorrhages. Water pepper, says a writer at Manchester, S. C., was used in his family in 1862 in dysentery, and every case was improved and cured. Mountain laurel was employed with claimed success in rheumatism, gout and glandular enlargements. Black alder used as wash in cutaneous troubles. Holly leaves used as an emetic, and birdlime made from the middle bark. Love vine used as a laxative tea. Pinckneya pubens, Georgia bark, useful in intermittent fevers. It is said that "Dr. Fair detected a considerable amount of cinchonine it it, but was prevented from continuing his examination."

Woodbine was given in asthma, and a decoction of the flowers administered to calm the pain of colic following childbirth. A decoction made by pouring boiling water over the leaves, flowers or berries of the elder bush was used as a wash for wounds to prevent injuries from flies. Sea myrtle was used in popular practice in South Carolina as a pallative and demulcent in consumption and coughs, a strong decoction given several times a day. Raw-weed used in whisky in place of quinine in Maryland. Cat weed employed in popular practice in diseases of chest and bowels. Hound's tongue employed in domestic practice as a mucilaginous drink, and the roots made into poultice in case of bruises, sprains, etc. Gravel

root given as an emetic. Horse nettle used as an aphrodisiac among the negroes. Virginian silk used as a diuretic decoction in gonorrhœa. The buds and inside bark of the long-leaved pine and bits of pine steeped in gin were favorite domestic remedies in coughs and colds, and as a diuretic.

What I have here collected has been put together in a busy season and during the war excitements that have just been engaging the attention of all our people. The result is not intended as a complete history of the conditions named. It could, necessarily, only be a part of the history of those conditions.

In designing this paper, I had hoped to make it more complete by using contributions from surgeons of the Confederate army and navy, and druggists engaged in business during the period, so far as they were living and from papers to be loaned me by them. Out of scores of letters addressed to living men of this character, I received but few replies. In obtaining some of the matter, railway trips had to be taken, and much of it was collected at considerable expense and labor. When it is remembered that the conditions that are suggested here lasted for a period of nearly four years, then the sufferings and the achievements and the heroism of seven millions of people are in a measure made manifest.

If I have succeeded in recalling by way of suggestion some facts that in the present may be of use, or in the future may be evolved into utility, I will have been rewarded for my outlay and my efforts.

The war of 1861–1865 is now but a memory. The heroes of both sides—those "tented" on "fame's eternal camping ground" and the survivors—are now dear to a reunited people, who, proud of the common victories of their fellow-countrymen at Manila and Santiago, and rejoicing in the vigor of American arms and the glory of American ideals, stand expectantly awaiting and hopefully facing the great future in store.

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THE TRUE RELATION BETWEEN THE PHARMACIST AND THE PHYSICIAN.*

BY GARRETT D. SMOCK, M. D.

Every institution extant in the world to-day has been called into existence to serve the necessities of mankind. The existence of the institution of government itself is due to this cause. The necessity for law and order, for the peaceful dwelling together of mankind, made it necessary that a power should be created to which all would submit. Every other institution when investigated will be found to have originated to serve man's necessities and comforts. Also every institution when investigated will be found to have originated from a chaotic state and to have been evolved gradually from small beginnings to a state of more or less perfection.

Medicine and pharmacy are no exceptions to this rule. We find them existing, after a sort, away back in very remote ages of the world's history, no doubt from the very infancy of the race. Man, from his very nature, physically was created subject to disease and death. The commonly received notion that the eating of the fatal apple by our great progenitor, Adam, first introduced disease and death is, I think, very erroneous. The remedies used to alleviate human suffering in remote ages were necessarily few and simple, and medicine and pharmacy were both in the hands of the same person, most generally the priest. They were, in fact, looked upon as a part of religion, and as the materia medica was very brief, it was supplemented by prayers and incantations and sorcery, or witchcraft. I am sorry to have to say, too, that such modes of practice have not become altogether obsolete in the world at the present day.

Prescription writing seems to have been practiced at a very early day. Thousands of them have been exhumed from the ruins of Babylon, Nineveh, Persepolis, and other Asiatic cities. They were written upon baked clay tablets. Many of them are medical prescriptions conjoined with magical practices, such as the incantations and exorcisms repeated over the sick. Some contain directions for compounding magical drinks which would destroy the evil spirits by which the particular disease was caused. No doubt these drinks were merely antiseptics or germicides intended to destroy the microbes which were then called evil spirits. I have a *fac-simile* of a prescription four thousand years old, and said to be the oldest prescription extant. The original is in the British Museum. It is written in cuniform characters, and although the language in which it is written has been dead for thousands of

*Read before the Hardin County Medical Society.

years, it is about as easy to read as a great many prescriptions which come into the hands of every druggist at the present day.

Both medicine and pharmacy continued in the hands of the same individual, who, as I have said, was generally the priest, until a comparatively recent time. Pharmacists finally in the reign of James the First obtained a charter for themselves apart from the practitioners of medicine, and although their charter included the grocers, the medical profession are in no position to sneer when it is remembered that at the same time barbers were the only recognized surgeons. Both pharmacy and surgery seem to have been at a discount long after they were divorced from the medical profession, and both had a long struggle before they were recognized as professions equally as honorable and as deserving as medicine. Indeed, surgery seems to have outstripped medicine at the present day, for while formerly the most learned and ambitious practiced medicine, the tendency now is to ignore medicine as tame and commonplace, and to rush into surgery. The constant dream of every ambitious young doctor now is to become a great surgeon. The knife is resorted to in every case in which its use can possibly be justified, and I am afraid in a great many where it could not be justified.

The rapid strides made in the science of medicine and surgery as a result of a general revival of learning and original research made it absolutely impossible for physicians and surgeons to compound their remedies, now indefinitely multiplied in numbers, and make them available at the bedside. This work was necessarily entrusted to the pharmacists, and they have nobly responded to the trust. They have established colleges and training schools of their own in every civilized country, where the science of pharmacy is taught as a profession, and scientific pharmacists are trained for their work. They have prosecuted original research until to-day scientific pharmacy stands fully abreast with the science of medicine, and physicians are under many obligations to scientific pharmacy for much of their success in the practice of the healing art. But the pharmacist is not the *rival* of the physician; he is an *ally*. It is in this capacity that the pharmacist finds his true place, and the two their true relationship each to the other. Each is a true helpmeet to the other, working hand in hand, each in his own proper sphere; they each fill a place and work out a destiny equally honorable and equally useful. Neither can work out his highest destiny without the other, for neither can put his talents to the highest and best use without the other. The motto of our beloved Commonwealth was never more forcibly illustrated—"United they stand, divided they fall."

Since, then, the pharmacist and the physician stand in this close relationship the one to the other, there are certain duties

which they owe the one to the other and which they should conscientiously discharge. The pharmacist owes it to the physician that he educate himself well in his profession, so that he will be able to compound the prescriptions of the physician in a scientific manner that the patient may derive the full therapeutic effects of medicines prescribed for him. Ignorance is inexcusable anywhere; behind the prescription counter it is criminal. The preparation of his remedies is always a matter of grave moment to the physician, for what avails his skill if it is all to be neutralized by poorly prepared remedies? Too true is it perhaps that ignorance is sometimes found behind the prescription counter, and also too true that it is sometimes found at the bedside, as the prescriptions which sometimes emanate from thence too plainly show; not professional ignorance alone, but the King's English is sometimes treated in a very barbarous manner. The three R's are to some of them still among the mysteries. Gentlemen, whether we be physicians or pharmacists, let us act upon the last words of John Wesley to his followers, "Wherever you go, preach a crusade against ignorance."

It is the duty of the pharmacist also to keep himself well supplied with the remedies usually prescribed by physicians and also the newer remedies, that the physician may have opportunity to test their value and avail himself of their virtues if found beneficial. On the other hand, the physician should not be too exacting in this matter. It is usually the case that one physician will want the article as made by a certain firm, another will want the same article bearing the label of a different firm, and so on. They should remember that to keep a stock of every manufacturer's make of pharmaceutical remedies would entail an expense which but few pharmacists could afford; but should they be able to do so, it would be entirely unnecessary. The article as made by any first-class manufacturer differs but little from that made by any other first-class house, and the physician, if called upon to state wherein the article made by his favorite house differed from that made by another, would often be puzzled to do so. Most generally he prefers it because he happened to fall into the hands of the representative of that particular house, who made large claims to exclusive merit in his preparations because of the exclusive advantages possessed by his house over all others. The only way to possess all the advantages is to possess all the money and all the brains in the business. Any first-class house with first-class business men at its head with ample capital at their command can always secure all the brains and all the material needed to turn out a first-class article.

The pharmacist owes it to the physician also to compound his prescription exactly as he has directed, unless he is satisfied that the physician has made a mistake. In this case he should

promptly inform the physician and have the mistake corrected or have the matter fully and satisfactorily explained. Should this pharmacist not have the article prescribed and be unable to obtain it promptly, he should at once inform the physician that he may direct him as to what he prefers having him use in its stead. Should the physician be at the time inaccessible and it be a case of emergency, the pharmacist should simply use his judgment as to the proper thing to be done, only let him be very sure that he is doing the proper thing. Unless it be a case of great emergency he had better wait until the physician can be heard from.

While on this subject, I desire to call your attention to the fact that there is a very bitter warfare being waged at the present time on pharmacists by the proprietors of patent medicines. You may have read articles in the newspapers purporting to be editorials denouncing pharmacists as base and systematic substitutors. These articles breathe a very vicious and malignant spirit, and you may not all know the source from whence they derive their inspiration. When once traced to their true origin, however, their animus is fully explained. There has been for a long time a determination on the part of pharmacists to eliminate the patent medicines from their business. True, scientific pharmacy is as much opposed to patent nostrums as scientific medicine, and pharmacists deprecate the fact that the handling of patent nostrums ever became a part of their business. In fact, pharmacists are opposed to all secrecy in connection with the preparation of pharmaceutical remedies. The American Pharmaceutical Association at its last meeting passed a resolution severely condemning the patenting or trade-marking of any remedy in medicine. A great many pharmacists who are prepared to do so are manufacturing preparations of their own with the formula on the bottle. Others who are not prepared to manufacture are having the work done for them.

The patent medicine men have organized to fight this, and have established a literary bureau from which emanate these vicious attacks upon pharmacists which are published in the various newspapers and other periodicals, for which they pay the papers a big price. These articles are intended to lower the standing of pharmacists and to destroy their customers' confidence in them. The last national meeting of the patent medicine proprietors voted a large sum of money to continue this warfare.

The question is being discussed now in pharmaceutical circles whether or not pharmacists should be graduates in medicine. There exists a difference of opinion, but all are agreed that they should possess considerable knowledge of at least some branches of medical science, as such knowledge would enable them to more fully appreciate the responsibilities of the posi-

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tion which they occupy. It is also desirable that physicians should be taught a certain amount of pharmacy, that they may be able to distinguish between true pharmacy and pharmaceutical quackery, and also that they may be better fitted to practice their own profession successfully when they are compelled to be their own pharmacists.

Before closing this paper I desire to emphasize the importance of physicians writing their prescriptions plainly and not abbreviating too much. Don't leave the pharmacist to guess at the meaning. Deaths have resulted from this. One occurred recently at Covington, Ky. The physician prescribed powd. ipecac, abbreviating it to "ipe," but the writing was so bad that the pharmacist read it "opi," and death was the result. The question now before the courts is, who is to blame?

The physician should always accord to the pharmacist liberal treatment. He should not take advantage of the pharmacist's liberality toward him to deprive him of his legitimate profit on his work and on his drugs. Sometimes the physician will have his own prescriptions compounded, paying the pharmacist little if any above the absolute cost of the crude material, which he then resells to his patient, charging him a large profit thereon, thus reaping not only the reward for his own services, but also that which legitimately belongs to his fellow-laborer, the pharmacist. This is entirely wrong, and fails to show a just and liberal spirit. On the other hand, physicians will sometimes have their own prescriptions compounded, which they will resell to their patients at cost or perhaps charge nothing for them whatever. This is equally wrong, for it not only deprives the pharmacist of his legitimate reward, but also creates dissatisfaction between the pharmacist and these same people when they have to pay for the medicines themselves. Pharmacists will generally sell to physicians at about cost, but they could not afford to do so with the people at large; if they did it would be only a question of time, and in most cases a very short time, when they would have to quit business.

If the pharmacist is making something by reason of your prescriptions, do not begrudge it to him. If he is honest and faithful, he deserves it. If you have a large practice, you are fortunate if you have a good pharmacist in whom you have confidence to prepare your remedies for use at the bedside. I well remember when I was doing a large practice ten miles from any drug store what a task it was to be my own pharmacist. When on arriving at home already very much fatigued and worried I would find several calls waiting, some of them perhaps very urgent, I would also find a number waiting for medicine. I would cheerfully have relinquished all the profit in the medicine, although I always charged a good price for it,

could I have had a good pharmacist to whom I could have turned over this part of the business.

Gentlemen, let us all labor for higher attainments, each in his own sphere, and for mutual confidence. Let us each and all strive for the highest proficiency possible for the relief of human suffering. This it is which distinguishes a liberal profession from selfish commercialism, and it is only when we are animated by this spirit, with this end in view, that we are worthy of our profession, whether pharmacist or physician.—*The American Practitioner and News.*

The Safest Hypnotic for Children.—Although sleeplessness in children can frequently be relieved by non-medicinal measures, it not rarely happens that the use of hypnotics can not be avoided, and under these circumstances the question will present itself to the physicians as to what remedy is the safest and most efficient for these little patients. It is important, of course, to select a hypnotic which will be entirely devoid of narcotic influences and which will not disturb the digestion, weaken the nervous system, or leave behind a train of unpleasant after-effects. In reviewing the list of the older as well as more recent hypnotics, trional suggests itself as the one best adapted for the various forms of insomnia in childhood. Dr. J. McGee, of Cleveland, Ohio, in a recent study of the action of drugs in children (*American Therapist*) expresses himself as follows in regard to this remedy: "It does not irritate the kidneys, and is very efficient when the insomnia is nervous in its origin. The dose at one year is from two to five grains, and this is gradually increased with each year. Twenty grains have been safely given to a child of ten or twelve years. This really represents an average adult dose, but it shows the tolerance and comparative safety of the remedy. It should be given shortly before retiring, as its effect is quite rapid, although the sleep is not so prolonged as that produced by sulfonal, which it equals in power, with the advantage of prompter action and freer from unpleasant after-effects."

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THE FUNERAL.

The funeral of Dr. K. N. Bahadhurji took place on Tuesday morning the 16th August at his residence at Malabar Hill. At an early hour on Tuesday morning, Parsees from all parts of the city were observed going in the direction of Malabar Hill for the purpose of attending the funeral, which was fixed for 8 a. m. The drawing-room, where the body was placed on a marble slab, was occupied by the ladies, and the verandahs and extensive *marquees* erected in the front and rear compounds of the bungalow by gentlemen. By 7 o'clock about a thousand Parsees had congregated, and long before the hour of the funeral several hundreds more arrived, some on foot, and a great many in conveyances, which lined the Ridge down to the end of Gibbs' Road, extending over a mile. Almost the whole of the male adult population of the community attended to pay their last respects to a man who was held in such high esteem during his comparative brief but brilliant professional career. The members of the family of Sir Jamsetjee, the Petits, the Alblesses, the Wadias, the Dadisetts, the Patels, and all the leading families were represented, and there were present no fewer than a hundred members of the medical profession. A large number of grateful patients, both old and young, and a still larger number of students, who had received the benefit of education at the hads of Dr. Bahadhurji when he was a teacher at the Grant Medical College, swelled the attendance. Prayers were said by the priests all night before the body for the repose of the soul of the dead, but the final funeral prayers were recited together by two of the family priests at about 7:30 a. m., and lasted for an hour. At the termination of the last ceremonial the whole assembly rose, and in procession marched past the house and entered by twos and threes into the drawing-room, to have a final look at the face of their deceased friend. The congregation was so large that though the gentlemen walked past the body, which was then placed on an iron bier, at a somewhat rapid pace, it took nearly three-quarters of an hour to accomplish that part of the ceremonial. The mourners then lined the compound on either side, in some places four and five deep, awaiting the passing of the bier. When the bier was conveyed by the corpse-bearers on their shoulders through the lane formed by hundreds of bystanders into the road, the funeral party formed themselves into a procession, the chief mourners being Mr. Nusserwanjee Bahadhurji, the father, and Mr. Dorab Bahadhurji, the younger brother of the deceased. The funeral cortege, which was followed by several hundred Parsees, wended its way from the Ridge down to the Malabar Hill Reservoir, and proceeding to Gibbs' Road turned into the main gate of Towers-of-silence hill. Walking at a slow and

measured pace, it took about fifteen minutes to traverse the distrance of about half a mile from the bungalow to the Towers-of-silence, where the funeral party were allowed an opportunity to have a last look of the body before it was consigned to the tower. Prayers were then said for the soul of the dead, and the mourners both at the house and the towers dispersed.—*The Indian Lancet.*

Asthma.—The celebrated "*Cigarettes d'Espic*" are said to be made of the following ingredients:

℞ Belladonna leaves	5½ parts.
Hyoscyamus leaves	2¾ parts
Stramonium leaves	2¾ parts.
Phellandrium aquaticum	1 part.
Extract of opium (aqueous)	⅛ part.
Cherry laurel water	q. s.

The dried leaves, stripped of their stems, are cut small, well mixed and then moistened with the extract of opium dissolved in the cherry laurel water. The paper used for making the cigarettes is also soaked in an infusion of these leaves in cherry laurel water. Usually in making these cigarettes, a little nitrate of potash is added to the infusion to make them burn freely.

The *Carton Fumigatoire* of the French codex, a very useful preparation, is thus made: Take 7 ounces of gray unsized paper and 2 ounces of powdered nitrate of potash; take of belladonna, stramonium, digitalis and lobelia leaves, each 75 grains; take of powdered myrrh and olibanium, each 150 grains. Tear the paper in pieces and soak it in water, then add the powders previously mixed, and pound and beat them all together. Then spread out the soft paste in tin moulds and dry it in a stove. Finally, cut this quantity into 36 pieces, each 6 cm. long and 4 cm. wide. One of these is burned in the patient's room.

The following is given as Himrod's cure:

℞ Lobelia leaves powdered Black tea leaves powdered Stramonium leaves powdered	aa ℥j

Pour upon this mixture 2 ounces of a saturated solution of nitrate of potash, mix thoroughly, and dry.—BURNEY YEO, *A Manual of Medical Treatment.*

LOCAL EXAMINATION AND TREATMENT OF DISEASE OF THE UPPER RECTUM SIGMOID FLEXURE.

Dr James P. Tuttle contributes a valuable article to the *New York Medical Journal*, July 2, on this subject, in which he strongly emphasizes the utility of the proctoscope or "Kelly tubes" in the diagnosis of diseases of these parts. Neoplasms, while not the most frequent lesions, are of paramount importance from a diagnostic point of view. Especially is this true of carcinoma for the reason that when neglected its cure soon becomes hopeless. The early symptoms of intestinal tumors are not only obscure but strikingly similar, and are often mistaken for functional or inflammatory disorders. But the diagnosis can be easily cleared up by the use of the proctoscope if the lesion exists within the lower twenty to thirty-five inches of the intestinal tract.

The serious forms of benign neoplasms may usually be dealt with through the tube itself by the use of proper instruments.

In treating of the non-surgical diseases mention is made of three forms of catarrh, viz., *simple, acute, hypertrophic* and *atrophic*. The latter is a very common affliction, comprising about twenty-five per cent. of the cases seen at the author's clinics. All these forms of catarrh may be recognized through the tubes as well as the several varieties of ulceration. The treatment of this class of affections consists in keeping the parts clean by means of saline or boric acid irrigations and applying the proper medication directly to the part through the Wales bougie.

The concluding paragraphs of the article are as follows:

"In conclusion, I wish to make two applications of the knowledge gained from a very large number of these local examinations of the sigmoid flexure and upper rectum.

"*Morning Diarrhea.*—The so-called morning diarrheas, the symptoms of which have been so admirably described by Dr. Francis Delafield, are, in my opinion, always due to some organic disease of the rectum, sigmoid, or descending colon. It may be cancer, polypus, papilloma, ulceration, or catarrhal disorder, but in every case I have seen I have been able to find some irritating condition of these parts to account for the diarrhea, and still more, the diarrhea has disappeared when the cause has been removed. The history of the case, the symptoms, the nature of the stool, etc., may lead us to fairly correct conclusions as to the cause of this condition, but we can never be certain until we have actually seen the parts, and upon this certainty will depend the accuracy and efficiency of our treatment.

"*Mucous Diarrhea.*—Mucous diarrhea is another condition due to actual disease. It is always associated with the follicular inflammation of the sigmoid flexure and colon. I have seen it

frequently in atrophic catarrh of these parts, and perhaps other diseases may cause it, but I have not observed them. The colicky pains and exhaustion after stool accompanying this condition are due to temporary partial obstruction and consequent spasm. Prolapse or intussuception of the sigmoid is one of the most frequent causes of this. I have frequently seen this condition through the tube, and when the parts have been restored and a full high enema given, the mucus was passed without any pain at all.

"The nervous conditions associated with this form of diarrhea appear to me to be all due to the disease causing it, and not vice versa. The doctrine that it is a neurosis appears to me utterly without foundation and not tenable in view of the conditions always found."

Carcimona of the Stomach.—Dr. Rumpel has reported a case of cancer of the stomach remarkable for certain clinical peculiarities. The patient was a man, 48 years of age, who had ailed for nine months, although the only symptom to which his cachectic condition could be attributed was an extremely abundant expectoration of muco-purulent masses which were ejected principally in the morning after an effort of coughing. The manner in which this expectoration was produced led to the suspicion of a pulmonary lesion. Microscopical examination showed the presence of pavement-epithelium and pus-corpuscles in the expectorated matter. As, however, every symptom of catarrh of the larynx was lacking and nothing abnormal was found in the lungs, the case was thought to be one of severe catarrh of the œsophagus, as is sometimes observed in malignant disease of the œsophagus or cardiac orifice.

The patient succumbed to the progressive cachexia, and at the autopsy there was found a cancer of the upper curvature and posterior wall of the stomach. The disease extended thence to the œsophagus. The latter tube was not constricted, and this fact explains the ease with which, during life, sounds could be passed into the œsophagus.—*La Tribune Medicale.*

XUM

ON THE MANAGEMENT OF PATIENTS WITH TYPHOID FEVER.

Taking for granted that the well-known rules for diet are observed (and as to diet I advise small quantities of the most easily absorbable food—preferably pancreatized milk or expressed beef juice, administered every two or three hours) and that when the hygiene of the sick room is properly cared for, water, and often cold water, is the one agent of greatest usefulness in the management of patients suffering from enteric fever. It should be used freely in every case, internally as well as externally. Too often, nurses, unless instructed, will wait for the patient to ask before offering him water to drink. Sometimes the patient is too dull to realize even the sensation of thirst. Nurses should be instructed to give at least a quart of water in every twenty-four hours; boiled water, if there be any doubt of its purity. In many cases systematic sponging with cool or cold water will fulfill all the indications for external hydrotherapy. The sponging must be thoroughly and properly done. Nurses must be specifically and carefully instructed in its details. In cases severe from the outset, or which become severe in spite of treatment, the systematic cold bath should be instituted. The inexpert will do better by following the rigorous method of Brand, than by attempting to modify the method. The experienced will introduce such modifications as each individual case seems to require. Many nurses fail to prepare the bed properly for the reception of patients after the cold bath, and it is necessary for the physician to give specific instructions to have heated blankets ready, to receive the patient on a warm sheet which is to be tucked in, so as to prevent two wetted skin surfaces from coming in contact, and which can be used for drying the patient, and is then to be removed so as to permit him to lie between the two warm blankets. The use of red wine rather than whisky to give the patient before and after the bath is advisable. In some cases the use of aromatic spirit of ammonia answers the purpose. Between the tenth and twelfth days, it is doubtful whether plunging should be begun. After the twelfth day, the inexpert should never begin plunging. Plunging begun earlier should be continued or discontinued, according to circumstances. When plunging is not well borne, as for any reason it has not been instituted, frequent cold or cool sponging should be carried out. This is partly to reduce temperature but largely, like the bathing, to promote general metabolism, to stimulate excretion, and to keep up the tone of the peripheral vessels. The effects on temperature, pulse, respiration, excretions, sleep and general comfort must be the guides as to time, temperature and other details of the external application of water, whether as plunging or sponging. Too

great a fall of temperature after sponge bath or plunge bath is harmful. A fall of, at most, one degree centigrade is enough for a single bath. Nor should patients be waked every two or three hours to have temperature taken or to be sponged or bathed. They should be allowed to sleep undisturbed for four or five hours, even when the applications are being made every second hour during wakefulness.

To reduce temperature, should this be thought necessary, and to prevent or control tympanites or hemorrhage, the continuous application of ice to the abdomen—usually over the right iliac fossa—is useful. Sometimes it is advisable to intermit the use of ice or to alternate the application of ice to the head and abdomen. In cases of severe nervous and cerebral symptoms, or very high temperature, there may be continuous application of ice to both head and abdomen. McCormick has had excellent success with the use of guaiacol externally.

Judicious internal medication is useful. The bowels should be cleansed by enema on admission (unless after the tenth day), after which, according to circumstances, a few small doses or one large dose of mercurous chloride (calomel) should be given. After the "calomel stool," intestinal disinfectants should be employed. These may not kill Eberth's bacillus, or neutralize its toxins, or chase after it into the spleen or cerebrum but they do render the patient's intestine a less favorable breeding ground for this organism and its many named and unnamed congeners; they do diminish the formation and hence the absorption of various named and unnamed toxins; they do render the course of the case less severe. Of drugs of this class, one may use guaiacol or its combinations, of which I prefer the carbonate; phenyl salicylate (salol); betanaphthol, or its benzoyl compound (benzonaphthol); creosote, or its carbonate (creosotal); carbolic acid and iodine, and the like. I usually employ salol or guaiacol carbonate, in doses of about five grains every second to fourth hour; more recently I have used benzonaphthol in doses of ten to fifteen grains. When diarrhœa is troublesome, bismuth salicylate may be used with the more powerful antiseptic. Betanaphthol-bismuth has been highly recommended. Should constipation be a feature of the case, an enema may be used every forty-eight hours, except during the period when ulceration is at its height, say from the twelfth to the sixteenth day, when the bowels should be let alone.

If, notwithstanding the free use of water, the urine is not excreted in sufficient quantity (that is, if it be less than thirty ounces in a day) some mild diuretic, as solution of ammonium acetate, or sweet spirit of nitre, or infusion of buchu, should be given. This is rarely necessary as the water drunk is usually an efficient diuretic, and the stimulation of the skin likewise assists excretion.

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When the tongue is dry, harsh, fissured, covered with brownish fur, turpentine is useful beyond doubt. Sufficient must be given; about fifteen drops in emulsion or syrup of acacia every second or fourth hour. Should any sign of renal irritation develop, turpentine must be abandoned. I have, however, never seen it do harm, and have seen it do good too often to be laughed out of its use. It also served well in cases of tympanites or hemorrhage. To help restrain hemorrhage, calcium chloride is sometimes useful.

During the second week strychnine is useful in small doses, say about 1-100 to 1-60 grain every second to sixth hour. During the third week it may be increased to 1-30 grain every third hour, if need be. Alcohol is rarely necessary before the third week and often unnecessary throughout.

The principal aims of treatment are to give rest, physical and mental; to regulate rather than to interfere with the development of the course of affairs toward recovery; to avert danger of hemorrhage by precautions in diet; to avoid overburdening the digestion, yet to nourish adequately; to keep the bowel clean and reduce sepsis; to maintain the secretions; to keep up the peripheral circulation; to do no useless drugging.—DR. S. SOLS COHEN, in the *Pennsylvania Medical Journal.*

Book Reviews.

GLAUCOMA, its Symptoms, Varieties, Pathology and Treatment. By Alex. W. Sterling, M.D., C.M. (Edin.), D.P.H. (Lond.), Atlanta, Ga.

This book comprises in great part a series of lectures delivered to the students of the "Post-Graduate Medical School and Hospital," of New York, and published serially in the "Annals of Ophthalmology," and gives evidence of most careful research, and a thorough knowledge of the subject on the part of the author.

BOOKS RECEIVED.

Twelfth Century Practice of Medicine.
Vol. XV.—Infectious Diseases. Wm. Wood & Co.
Simon's Chemistry. Lee Bros.
Osler's Practice. D. Appleton.
The Mind Reader. L. M. Phillips, F. Tennyson Neely.
Diet and Food, Haig. P. Blakeston.
Diet for the Sick. Illustrated Medical Journal Co.

Editorial.

CHRISTIAN SCIENCE IN ATLANTA.

Owing to the social prominence of the leaders in this special type of religio-medical heterodoxy, Christian Science has had a strong following in Atlanta. Its devotees have maintained a place of meeting and are now on the point of erecting a church. For ten years they have practiced their befogged nonsense for money in open violation of the law.

In the death of one of their eternal gullibles of typhoid fever a short time since, it is hoped the cult will be dealt a heavy blow and many neophytes be frightened off.

A woman living on Courtland street was attacked by typhoid fever. Christian Scientists were summoned and for three days they "wrastled" in prayer, at so much per "wrastle," for salvation of the body, which, unlike that of the soul, is not free.

But prayers and incantations were unavailing, and those recalcitrant little skeptics—the baccilli of Eberth—they only laughed. At length a doctor was called in, but science had done its allotted task,—real science, not luminous decay—the science that teaches unless disease be antagonized the organism invaded must die,—and so the soul, that *quasi* science strove to keep in its "non-existent" tabernacle, passed to its reward.

A reporter from an afternoon paper was sent to interview the "wrastler" in chief. The following is quoted from his interview:

Mrs. Downs was seen at her home this morning and asked. what was the direct cause of the death of Mrs. Lindsay At first she was not inclined to talk, and said that the newspapers had no right to pry into the affairs of people, but finally said:

"It was a combination of mortal thought and chemicals that killed Mrs. Lindsay. It was that and nothing but that.

"The neighbors around the Lindsay home are ignorant and they clamored for a physician and one was called in. It was an effort to appease mortal thought that did this.

"The confusion caused by mortal thought and the absence of strength given by the Christ faith was more than Mrs.

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Lindsay was able to resist, and she died. When the physician was called in I left the house and have not been there since.

"Mrs. Lindsay was doing beautifully while under the Christ cure. She did not want a physician, neither did her husband. They called one in because of the clamor made by the neighbors.

"Now it was published that while we had charge of the case that we would not even give Mrs Lindsay ice-water. Such a statement," continued Mrs. Downs, pronouncing the letters and not the word, "is a l-i-e, and I can not see why it should have been printed.

"Why!" exclaimed Mrs. Downs, 'we are not brutes. We are the most humane people in the world. The human mind and mortal thought are not humane, and we are. Mrs. Lindsay had ice-water, and plenty too, but she did not want it.

"There is no necessity," said Mrs. Downs, "to say anything about the Christian Scientists having any connection with the case, as we left when the physician came in."

When asked if Christian Science healers made any charge for their services, Mrs. Downs said: "Certainly we do. Christ said the laborer was worthy of his hire, and we couldn't keep up our rooms unless we accepted pay. We never send in a bill like a physician, but it is generally understood that we are obliged to have money."

Mrs. Lindsay will be buried this afternoon at Hollywood. The husband says: "I am just as firm in my belief as ever."

Comment is well nigh superfluous. The cause of death, "mortal thought and chemicals," scarcely measures up to even the elastic requirements of a death certificate. Perhaps a little more "mortal thought," if that be another mode of expressing common sense, combined with the judicious and timely use of "chemicals," might have averted the calamity. Mortal thought as a cause of death will not figure largely in the mortuary returns of the Christian Scientists. They are as a class immune to the operations of common sense.

As for "chemicals" an occasional brisk purge with calomel would help them to a belief in the existence of matter and at the same time dispel much of that religious fervor which comes from sluggish peristalsis and hepatic torpor.

Hid behind this farce is tragedy. Human lives are jeopardized and even lost. It would be well for the law makers and supporters to think of this.

So long as the whims and vagaries of hysterical women and flabby men are the objects of this "Christ cure," it can do no

harm and may be considered as a silly diversion for old maids and childless married women, with such hen-pecked specimens of masculinity as they can bring into the fold. But when a serious disease is concerned—one which endangers life or menaces its security; one which requires skilled medical attention and prompt and judicious treatment—it is no longer a joke. The insane bigots should be caught by the firm hand of the law and thrust *sans ceremonie* out of doors.

If death occur under this charlatanry it is manslaughter, as has been adjudged in other States. Then why not in this?

Is human life so mean a thing that it is allowed to slip away with no one to hold out a staying hand? All good and pious people believe in the efficicacy of prayer. At the same time they have a firm faith in the power of drugs. The mother prays over her sick little one and arises from her knees to follow the doctor's directions. She believes that it is God who gives skill to the physician, and in the good effect of the medicine she sees the answer to her prayer. This is not very scientific. But it is comforting and Christian and true.

Who would surrender this wholesome belief for the inchoate nonsense of a lot of ignorant women and eunuchs? None but plastic weaklings. But these, like the poor, we have always with us.

Dr. John M. Langsdale has retired from the editorship of *Langsdale's Lancet*, to be succeeded by Dr. John Punton. The publication will be known hereafter as the *Kansas City Lancet*. Dr. Langsdale built up an exceedingly attractive journal and his retirement is to be regretted.

It will be a great matter of gratification to the friends of the coalition to learn that the Atlanta College of Physicians and Surgeons opened its first session with 145 matriculates. Before the end of the first half the number will probably be increased to 250. The greatest harmony prevails and there is every augury of success and prosperity.

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Dr. Donald Taylor, acting assistant surgeon, son of Maj. B. D. Taylor, died at Fort McPherson, October 16th, of peritonitis from perforation during the course of an attack of typhoid fever.

L. Stoeber, a second-year medical student and member of the hospital corps, died at Fort McPherson of the same cause. His death was peculiarly sad. He had taught himself the rudiments of an education, and since his matriculation in the then Southern Medical College two years ago, he had given evidence of ability and was a most diligent and indefatigable student. It is unfortunate that his heroic progress toward the end of his ambition should have been untimely cut short.

The Kentucky School of Medicine Controversy has been decided permanently by the Court of Appeals in favor of Drs. Kelley and Woody, Dr. Wathen being enjoined from claiming to be dean of the school.

The *Atlantic Weekly* suspended publication on October 1st. The unexpired subscriptions have been transferred to the *Philadelphia Medical Journal.*

BUSINESS DEPARTMENT.

Address all letters relative to business matters and make all money orders payable to B. M. Zettler.

If the SOUTHERN MEDICAL RECORD is sent to any one who does not wish it, or beyond the time he intends to pay for it, the manager must be informed directly to stop it. It will not be sent knowingly to any one who does not wish it, but if notice is not given to discontinue, payment will be required for the time it is sent.

ATTENTION.—All communications and all matters pertaining to this department must reach us by the 20th of the month to insure insertion in the following month's issue.

Special Notes.

FOR ACUTE CYSTITIS—Bromide of Potash oz. ½; fld., ext. gelsemin, gtt. 10; fld. ext. hyoscyam, dr. 2; lithiated hydrangea (Lambret), q. s. ad. oz. 4. Mix. A dessertspoonful every four hours. Milk and flaxseed tea as drinks.—*Kansas Medical Index.*

W. C. FREDERICK, M. D., Lono, Ark., says: I have used S. H. KENNEDY'S EXTRACT OF PINUS CANADENSIS (DARK), one to three of water, in sore throat from cold, with splendid results, and have now under treatment a little boy, three years old, suffering from strummous diathesis, who had been afflicted over a year with otorrhea. Have been using as an injection two drachms of S. H. KENNEDY'S EXTRACT OF PINUS CANADENSIS to four drachms of water, three to five drops, two or three times a day, the ear previously cleansed with castile soap. The little fellow commenced to improve from the very start and is rapidly improving daily; the discharge has almost ceased. He has been on this treatment for about two weeks.

Very seldom do I say anything for a preparation that might be used as a testimonial, but I feel that I have sufficiently tried Unguentine to lend a word of encouragement to its varied uses. I used it almost exclusively in a case of severe conjunctivitis, due to strong caustic Silver Nitrate with the most gratifying results. The severe pain ceased almost instantly, the severe burning subsided and the lachrymal fluid checked. Patient comfortable in twenty minutes and slept soundly for the night. We never had any more swelling or further alarm. I have treated another case of Conjunctitis, with similar results, that was brought about by Chrysophranic Acid, used for a ringworm. We use Unguentine exclusively in our family for all sores, bruises, diseases of the skin (including parasitic troubles) and mucous membranes, such as hemorrhoids, etc. We have equally as good results in general practice. I

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